



DIAGNÓSTICO POR IMÁGENES EN ORTODONCIA

Od. María Julia Ramirez

Diagnóstico



Establecer si hay salud
o enfermedad

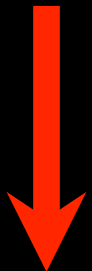


Establecer la entidad
patológica

Pronóstico



Definir su gravedad y
evolución



Plan de tratamiento



Lograr estado de
salud bucal

Diagnóstico por imágenes

Complemento del examen clínico

Valor:

Legal

Diagnóstico

Evaluación a distancia



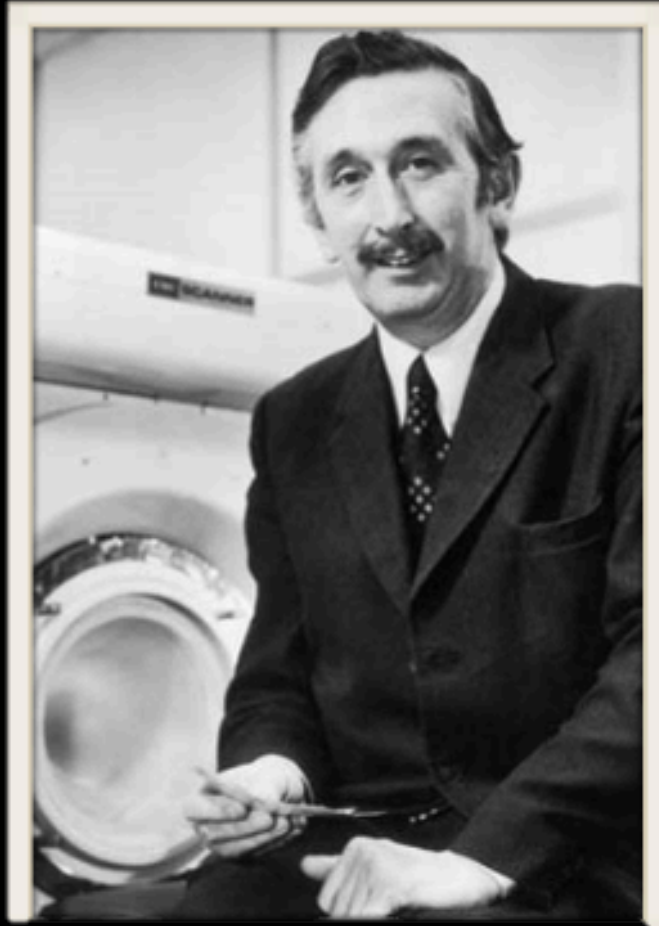
ROENTGEN

1895

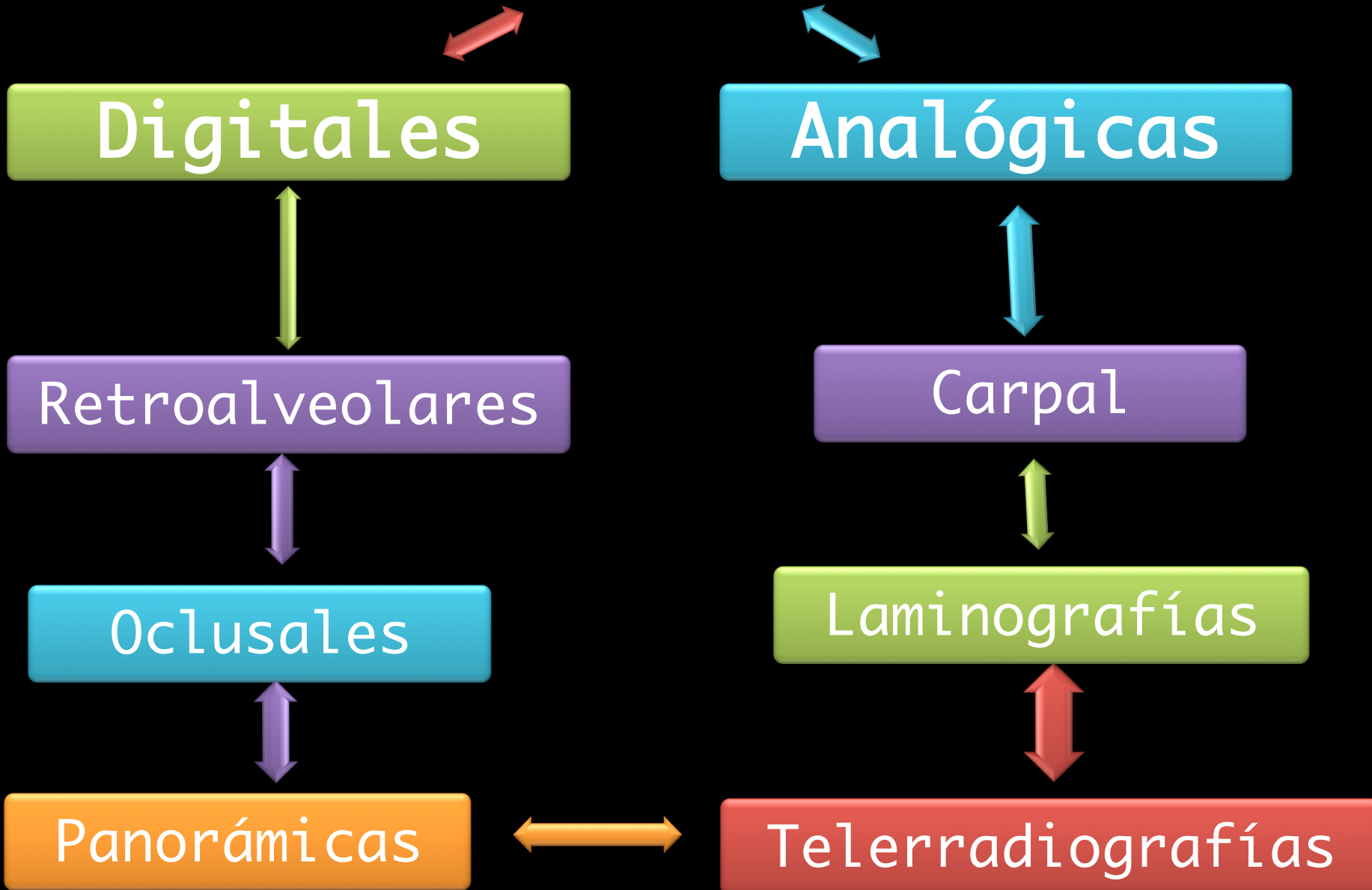


HOUNSFIELD

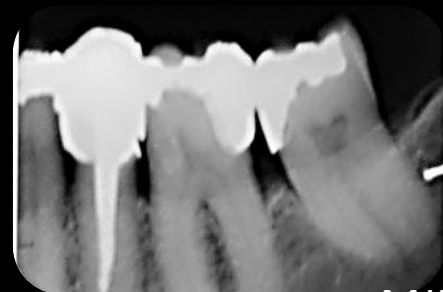
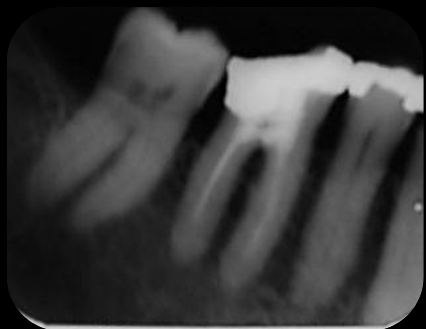
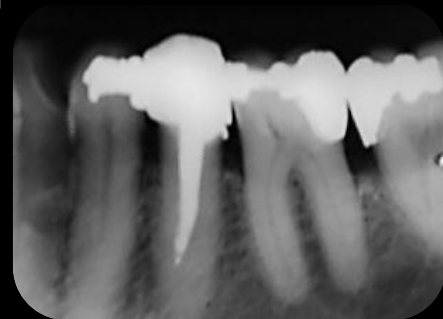
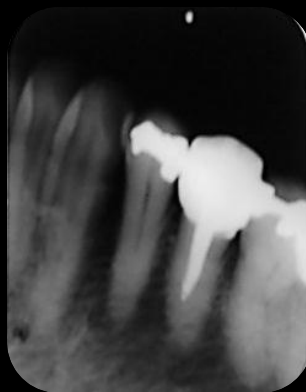
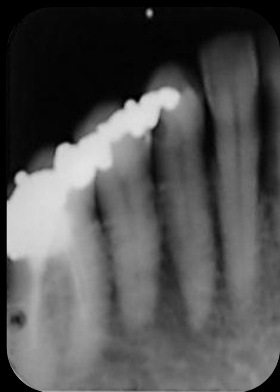
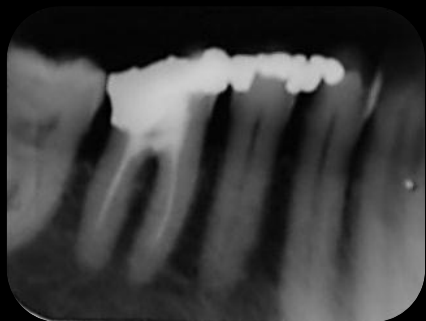
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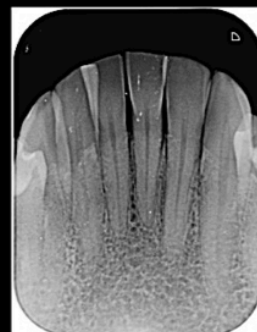
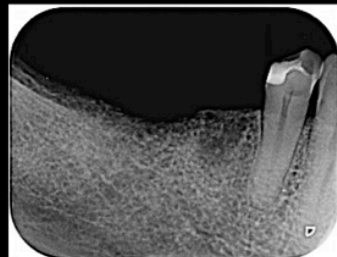
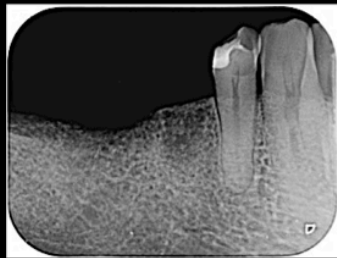
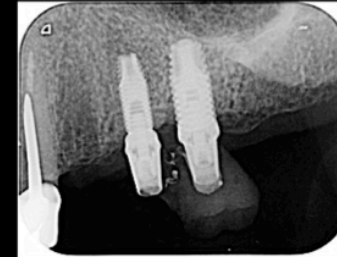
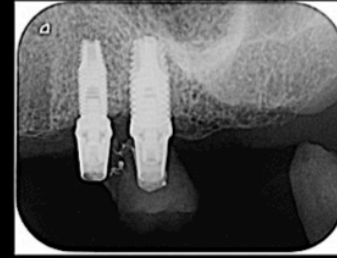
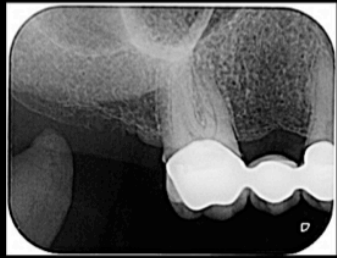


Radiografías



Seriada Analógica





Seriada Digital

Método de Clark

Es un estudio radiográfico, en el que se puede determinar si un “objeto” se encuentra por vestibular o por palatino o lingual.

MÉTODO DE CLARK

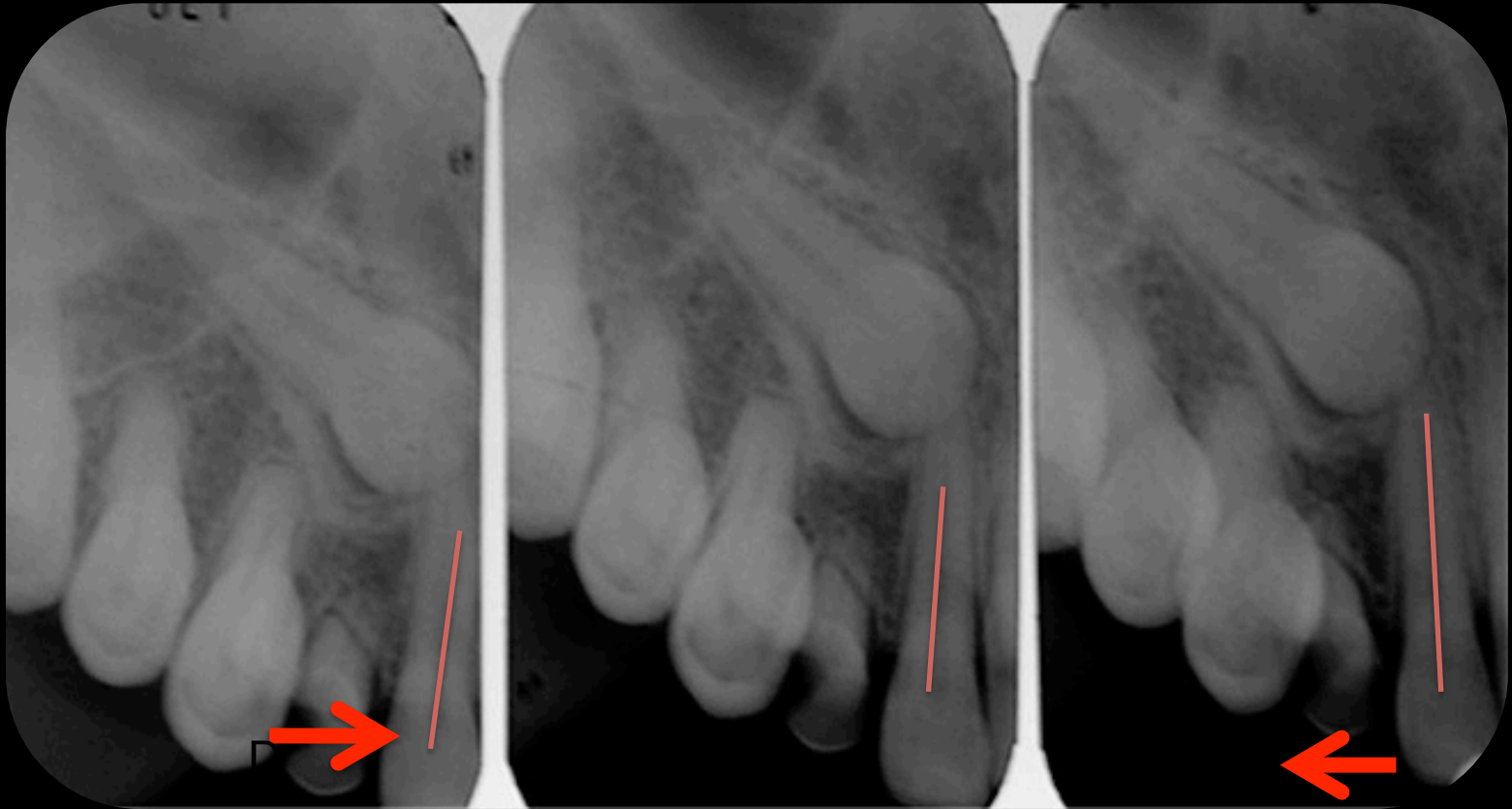
Tres incidencias:

✓ Normo radiación

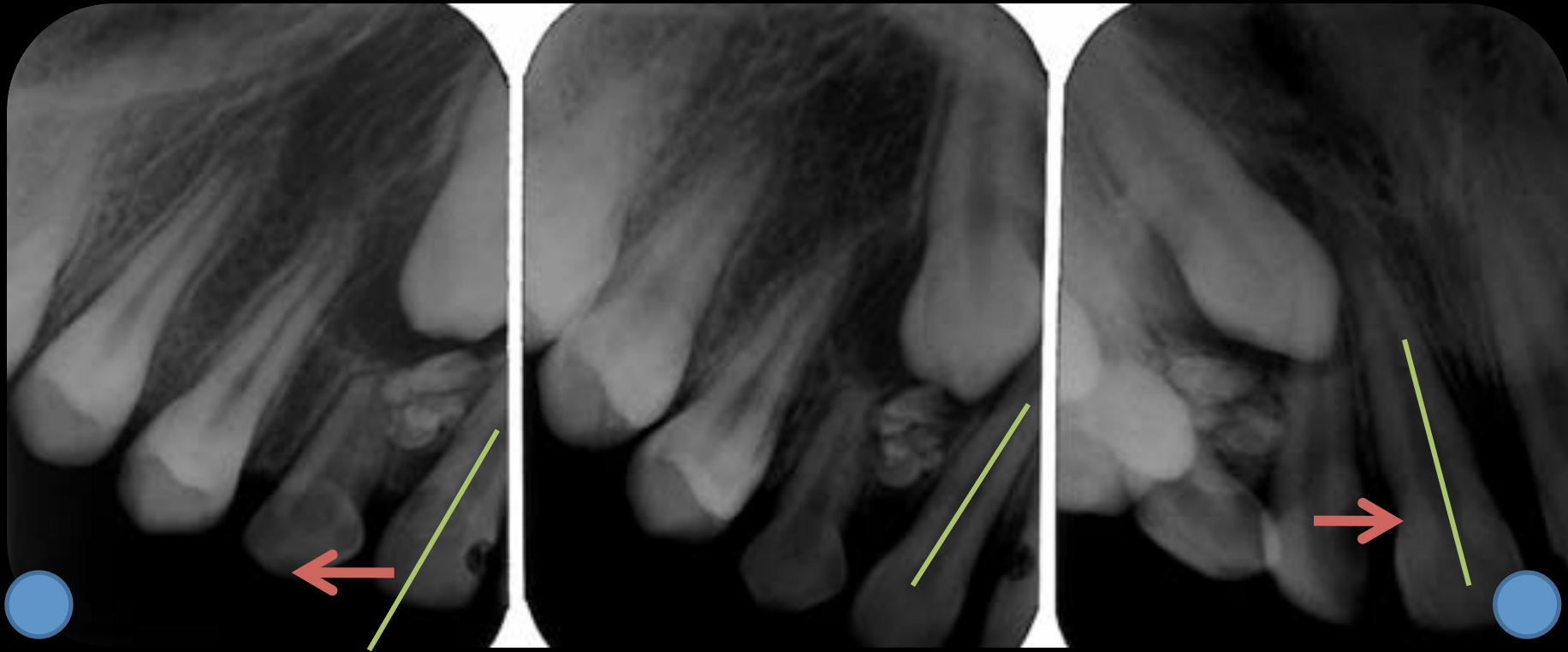
✓ Disto radiación

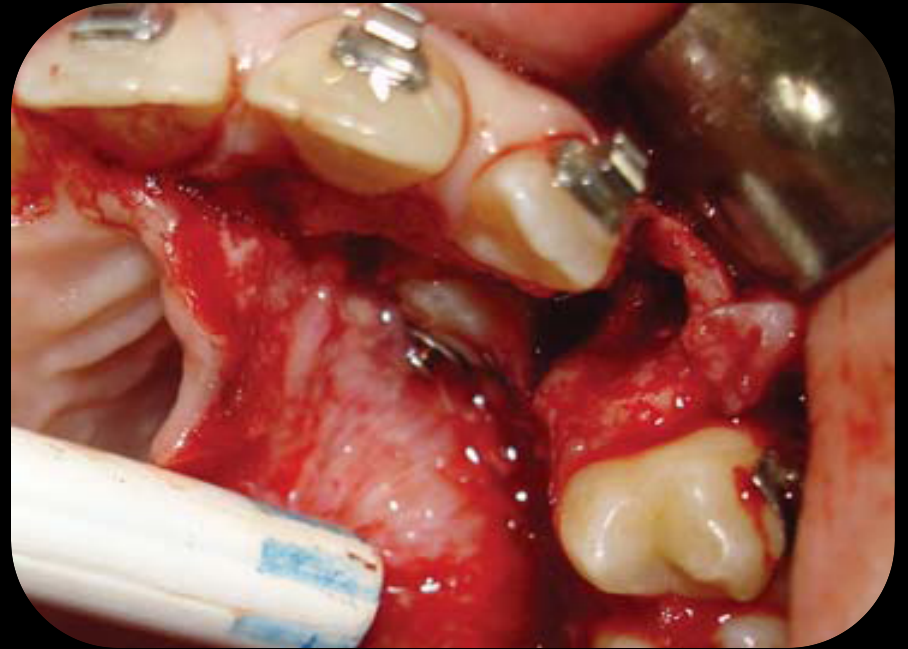
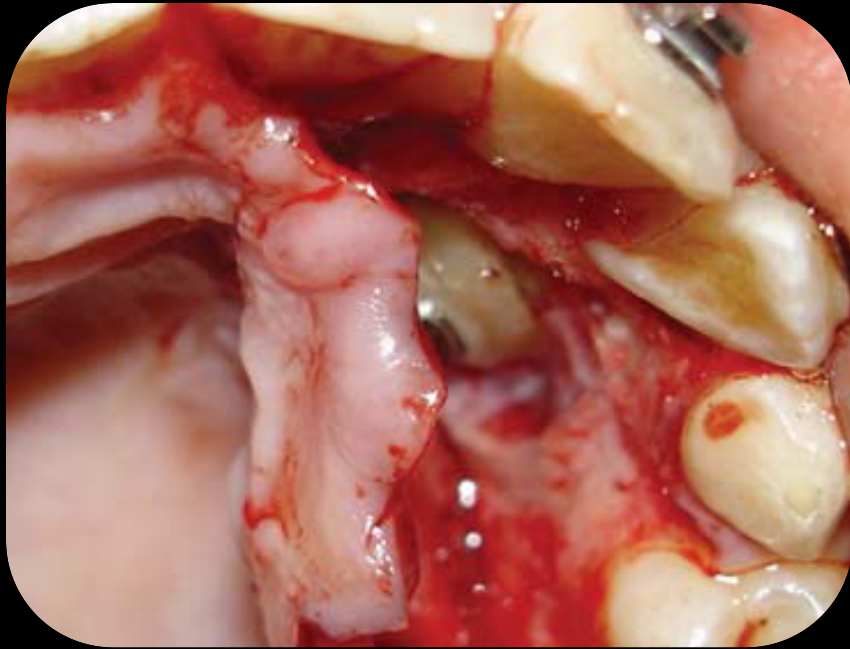
✓ Mesio radiación

OBJETO EN VESTIBULAR

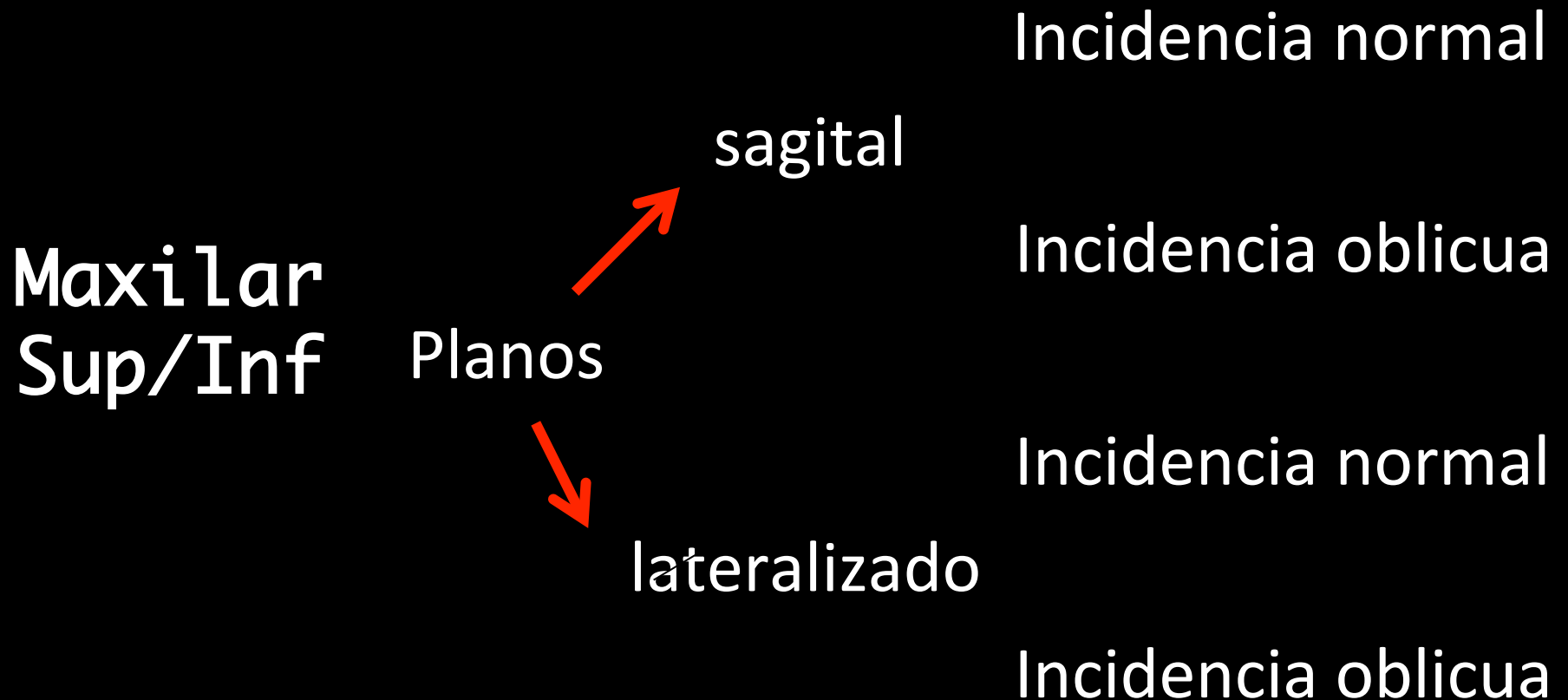


OBJETO EN PALATINO

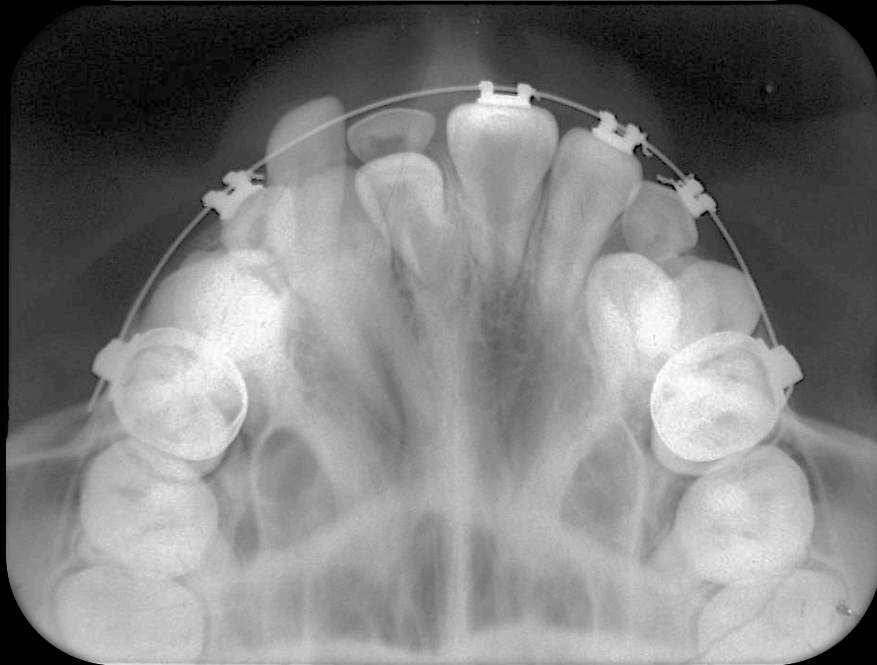


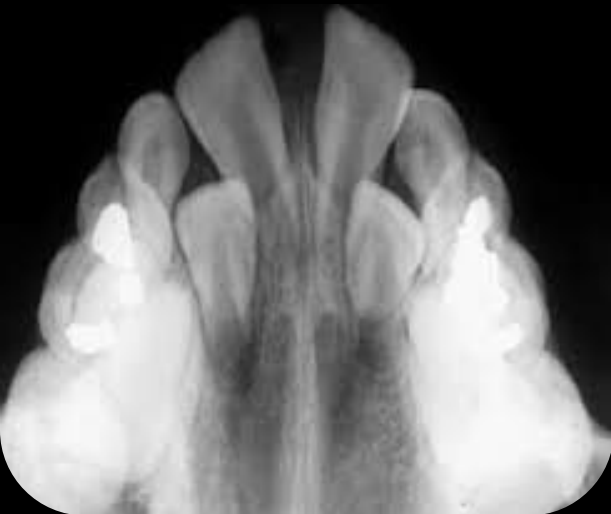
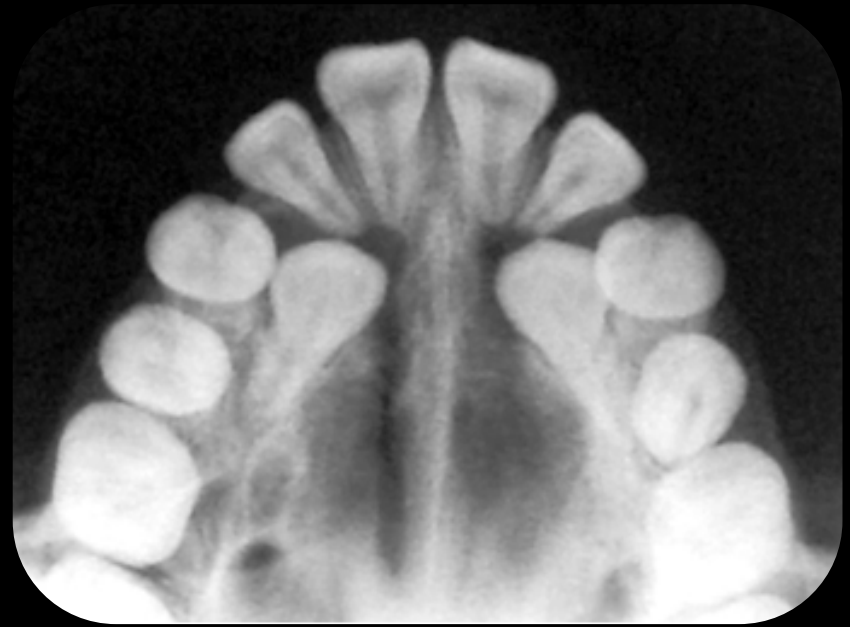
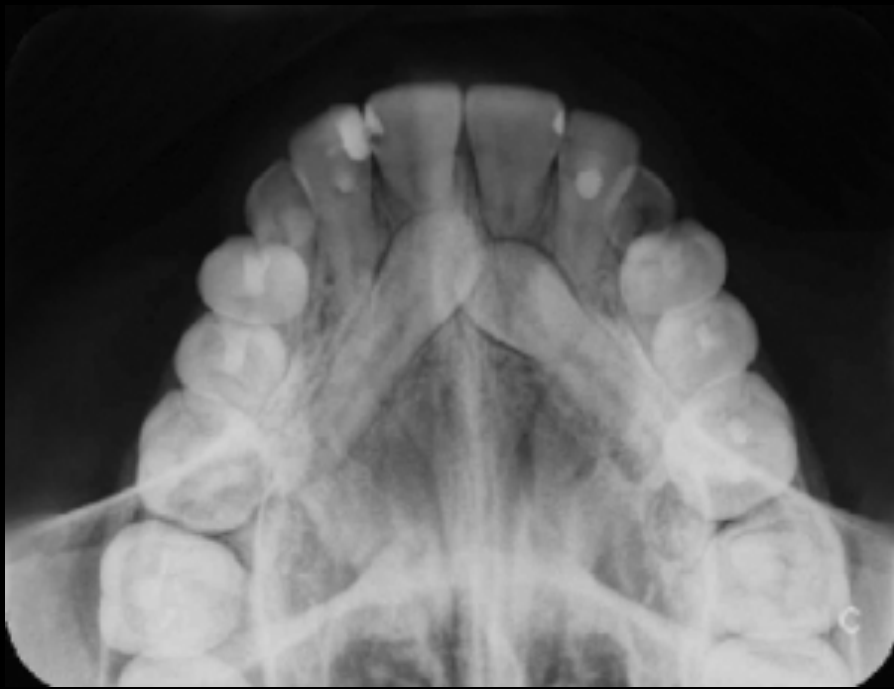


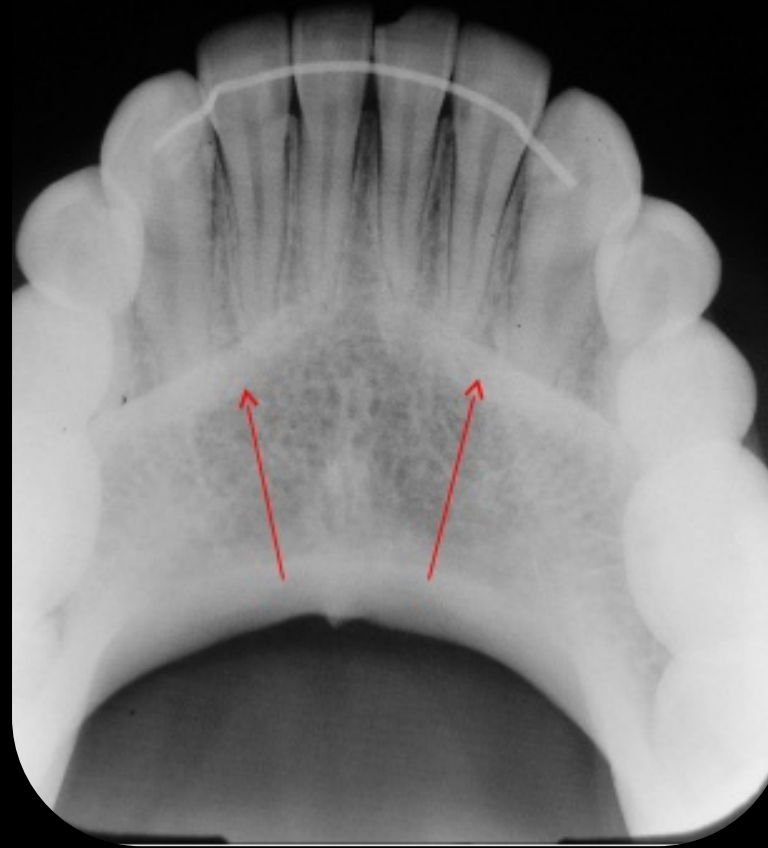
CLASIFICACIÓN DE TÉCNICAS OCLUSALES

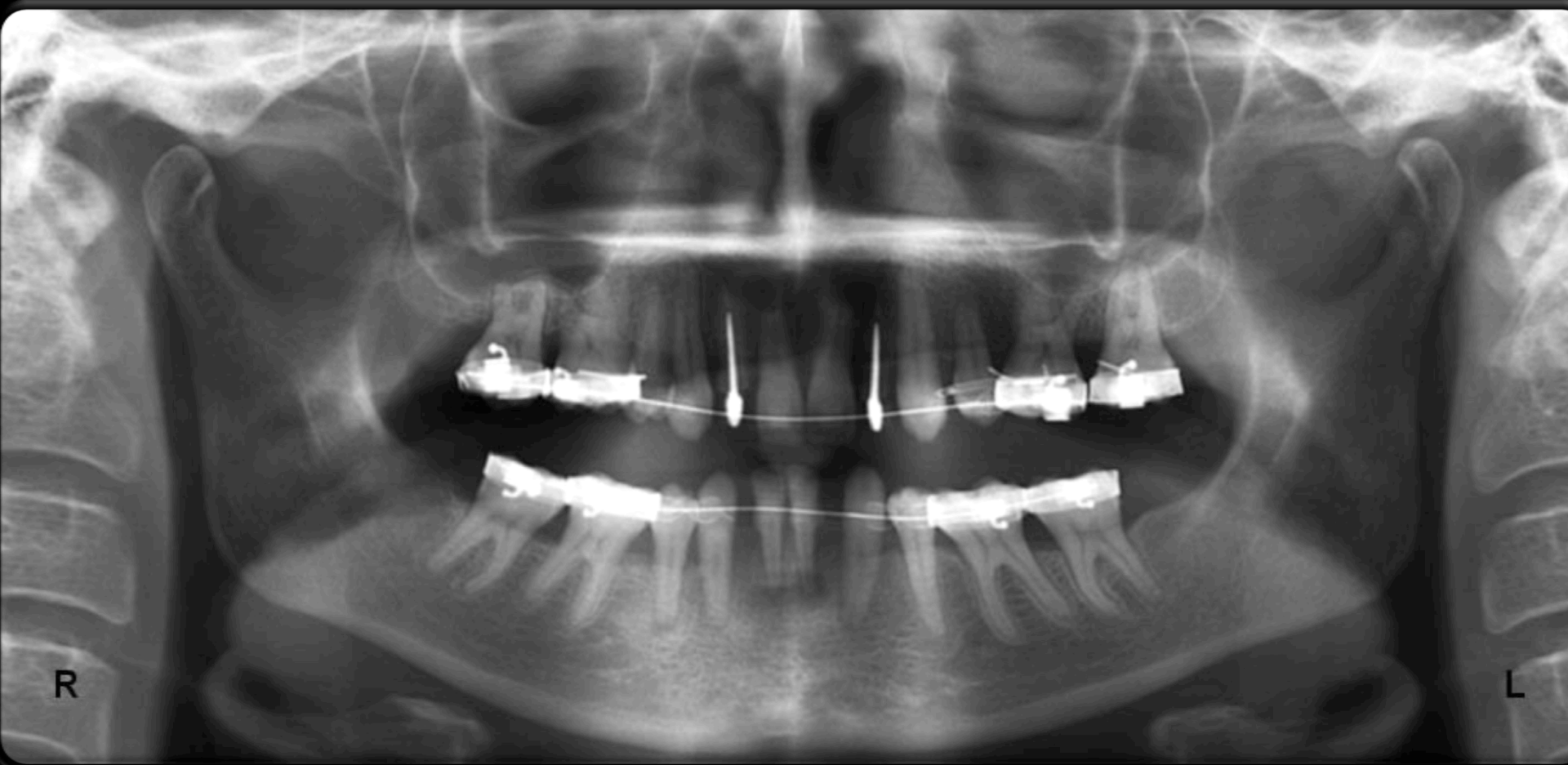


IMÁGENES









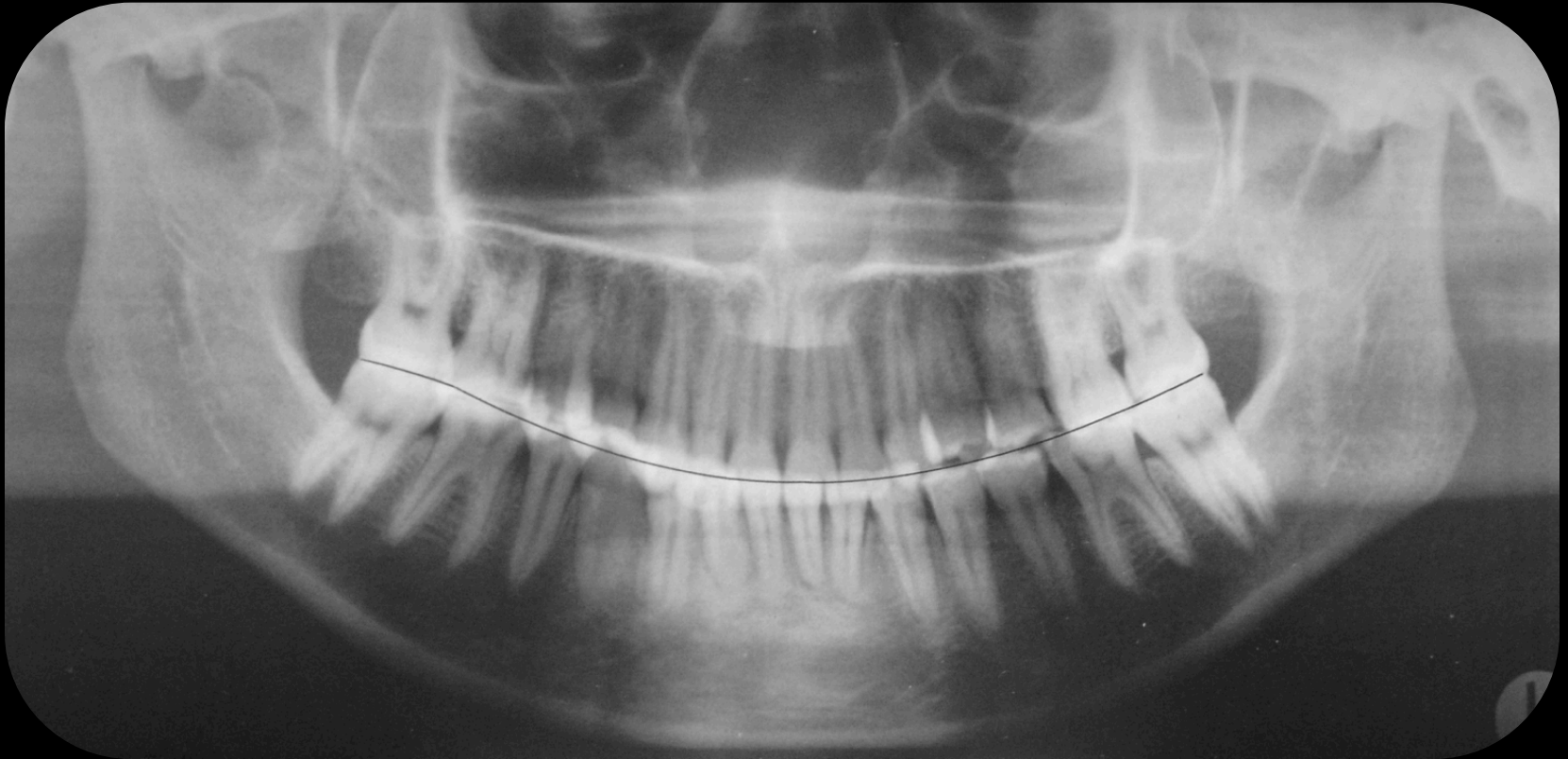
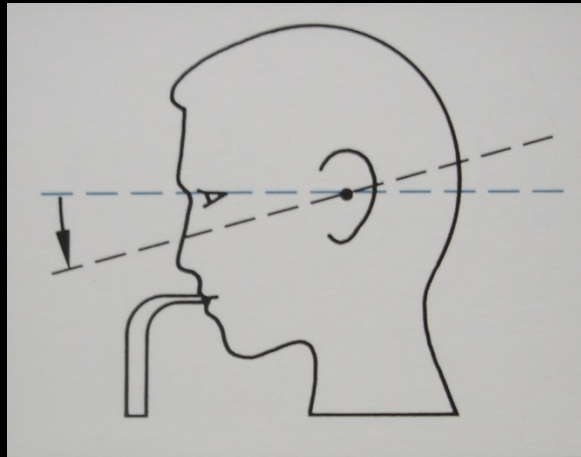
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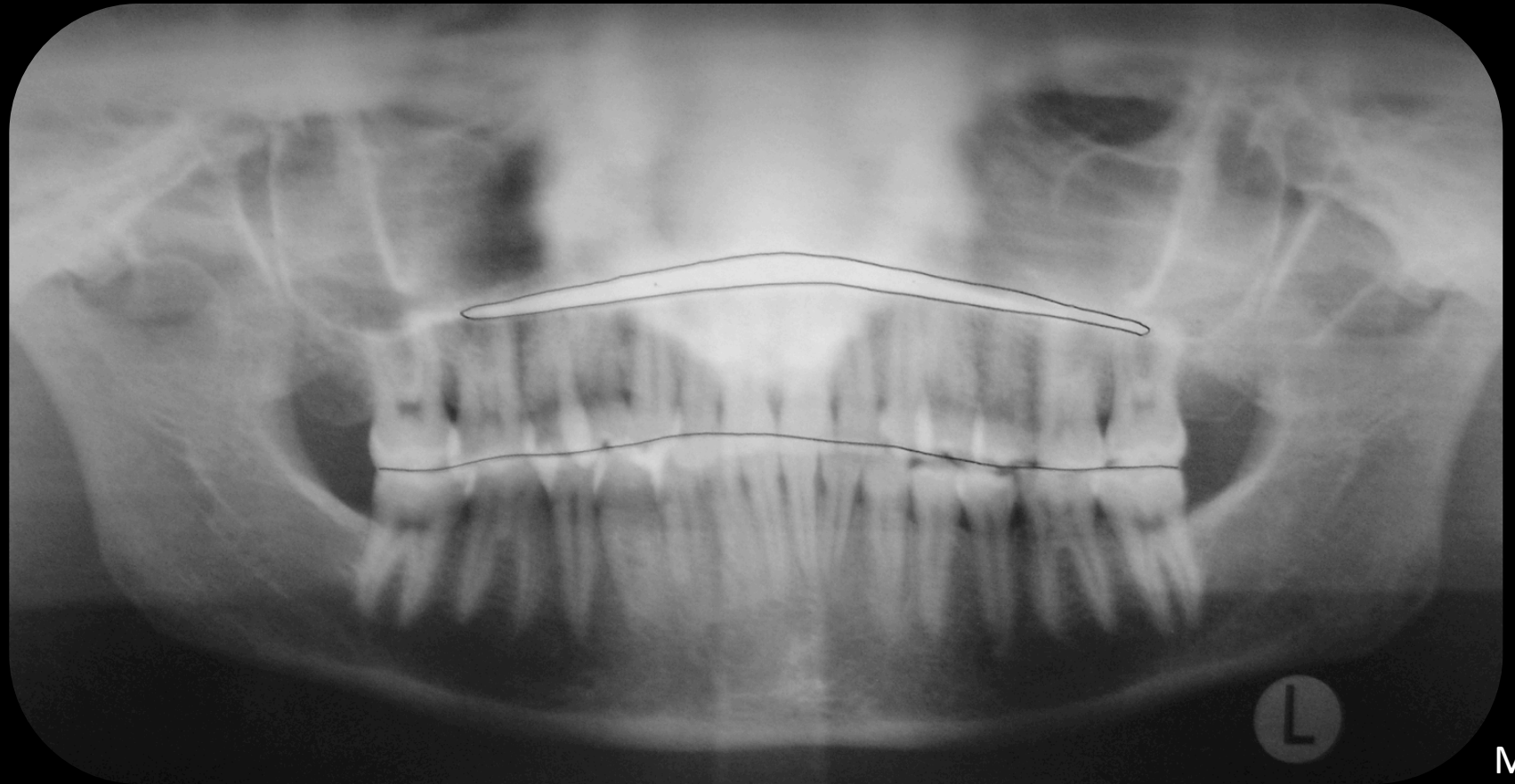
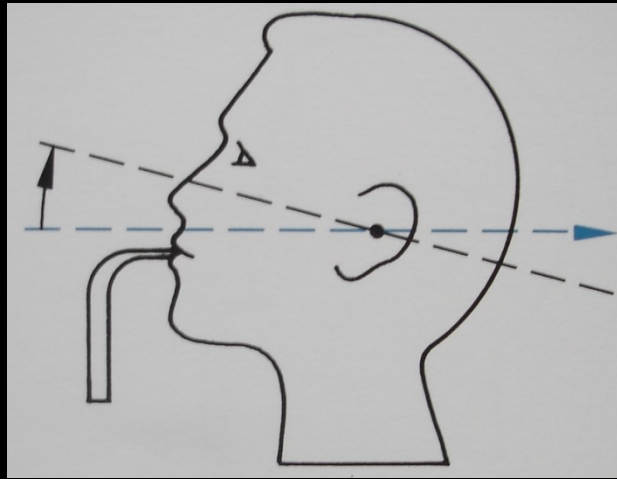
MJR

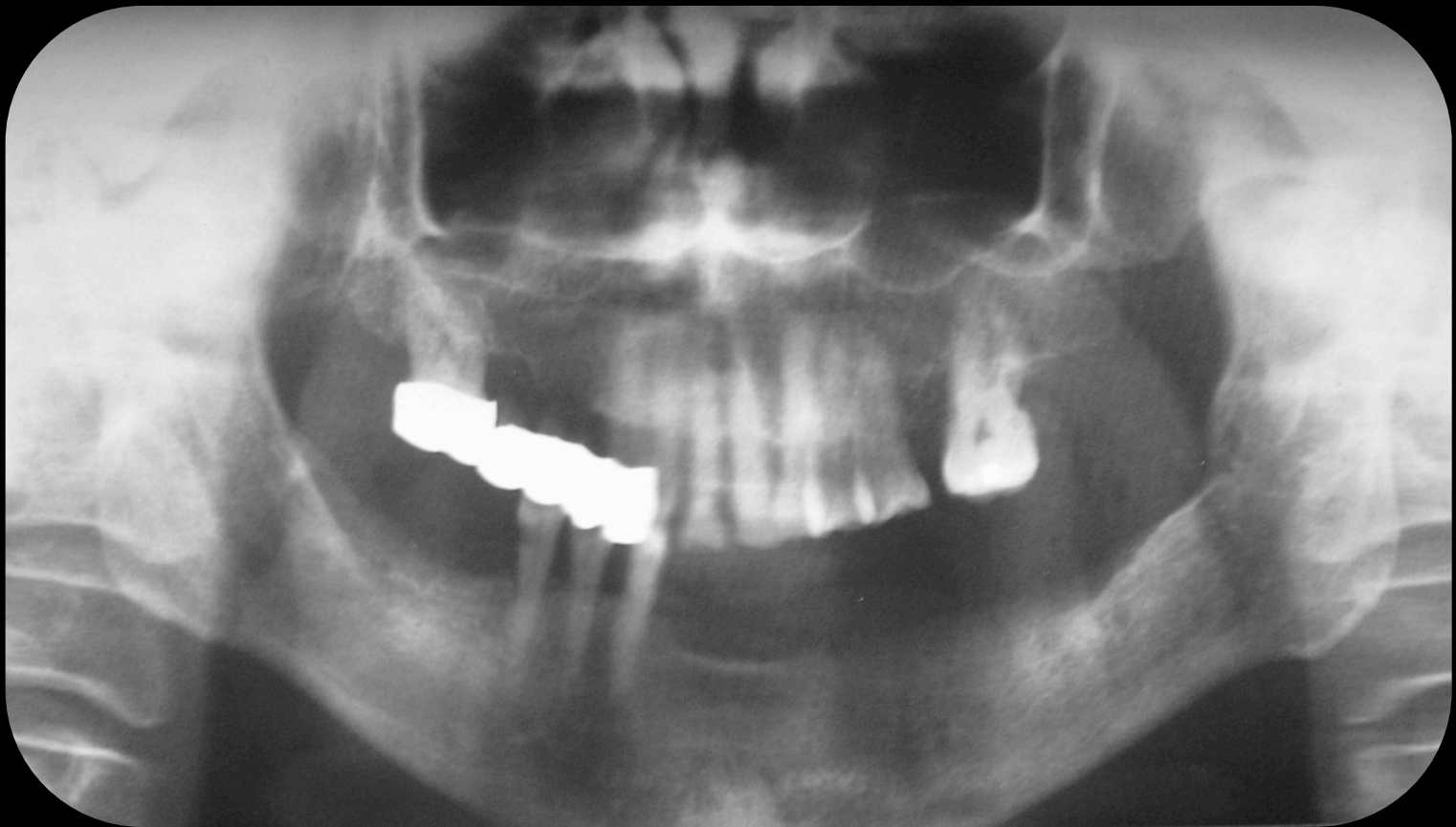
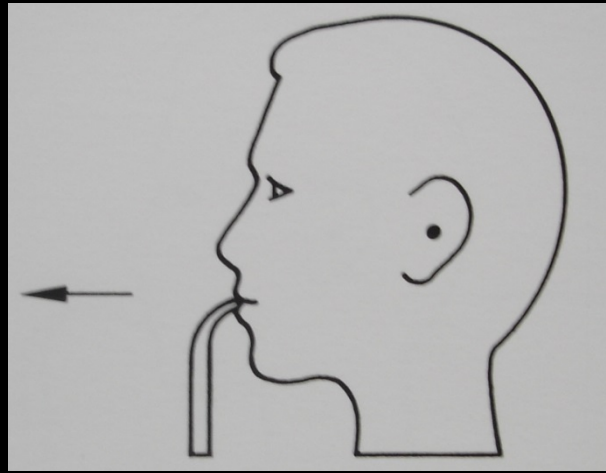


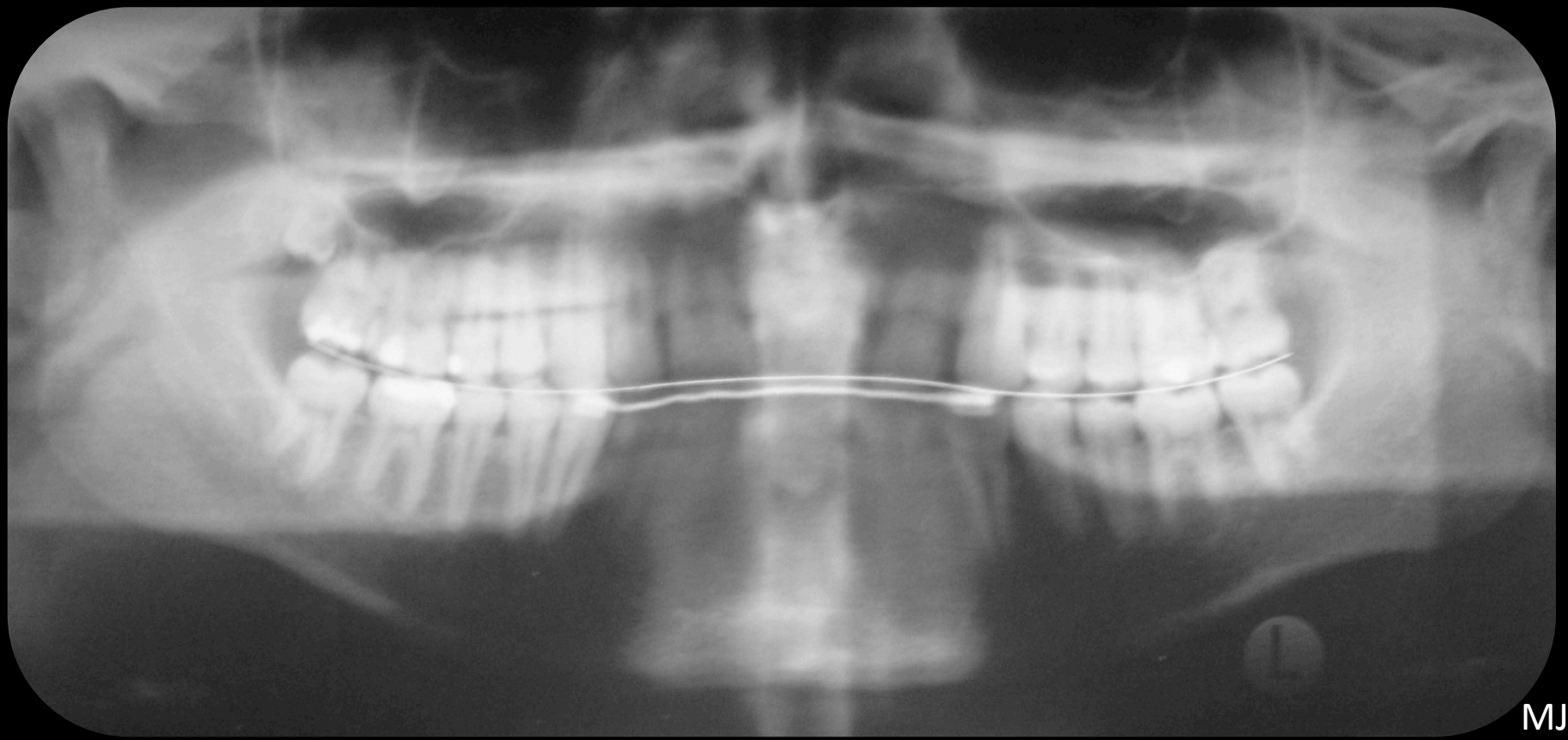
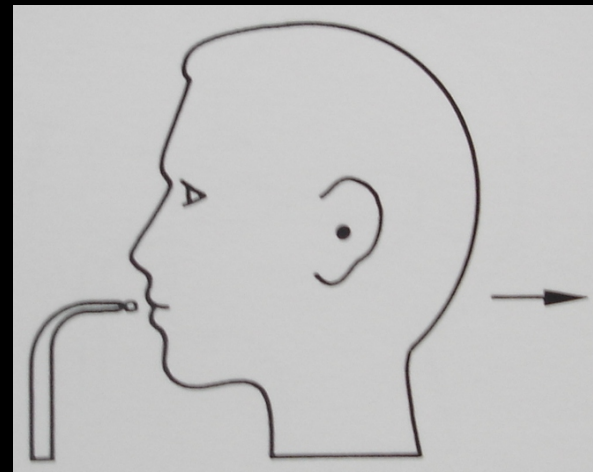
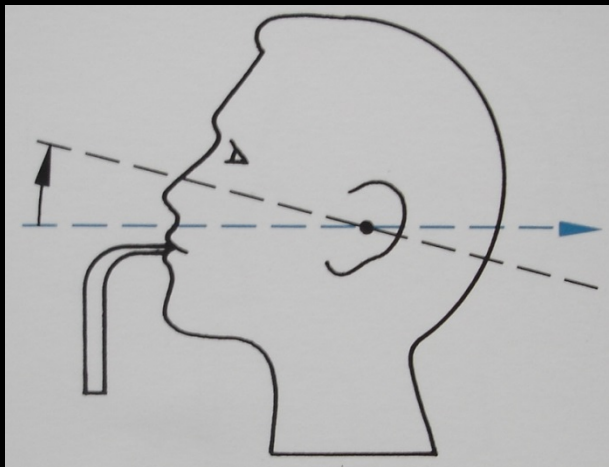
RELACIONADO CON LA POSICIÓN DEL PACIENTE

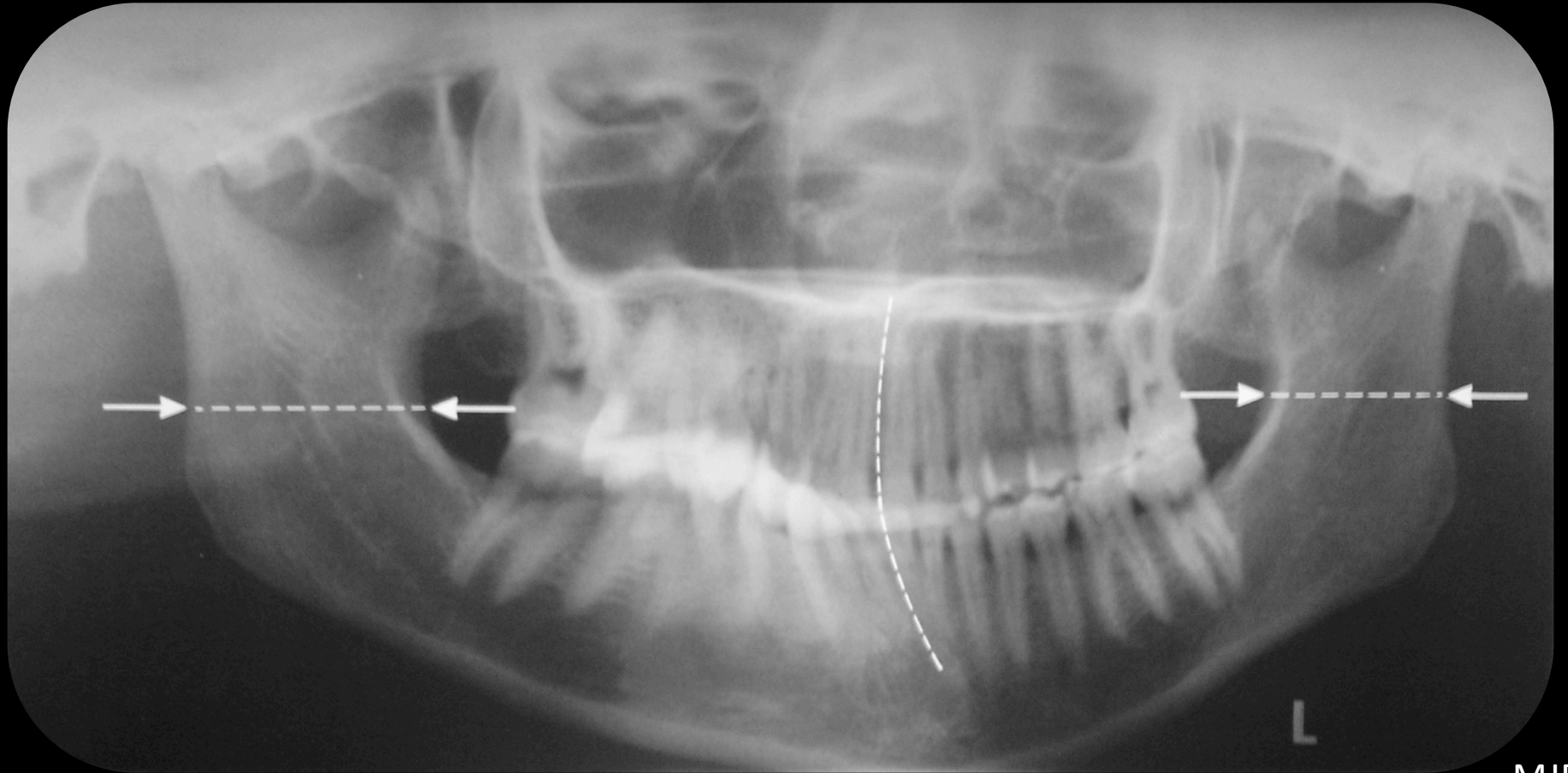
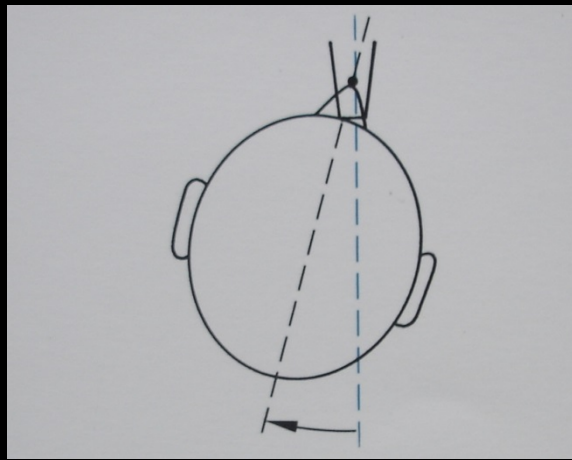
- ENFOQUE PARA EL MAXILAR SUPERIOR
- ENFOQUE PARA EL MAXILAR INFERIOR
- POSICIÓN ADELANTADA
- POSICIÓN HACIA ATRÁS
- PLANO SAGITAL INCLINADO
- PLANO SAGITAL LATERALIZADO
- SUPERPOSICIÓN DE COLUMNA CERVICAL
- LÍNEA MEDIA DESVIADA
- FALTA APOYO LINGUAL

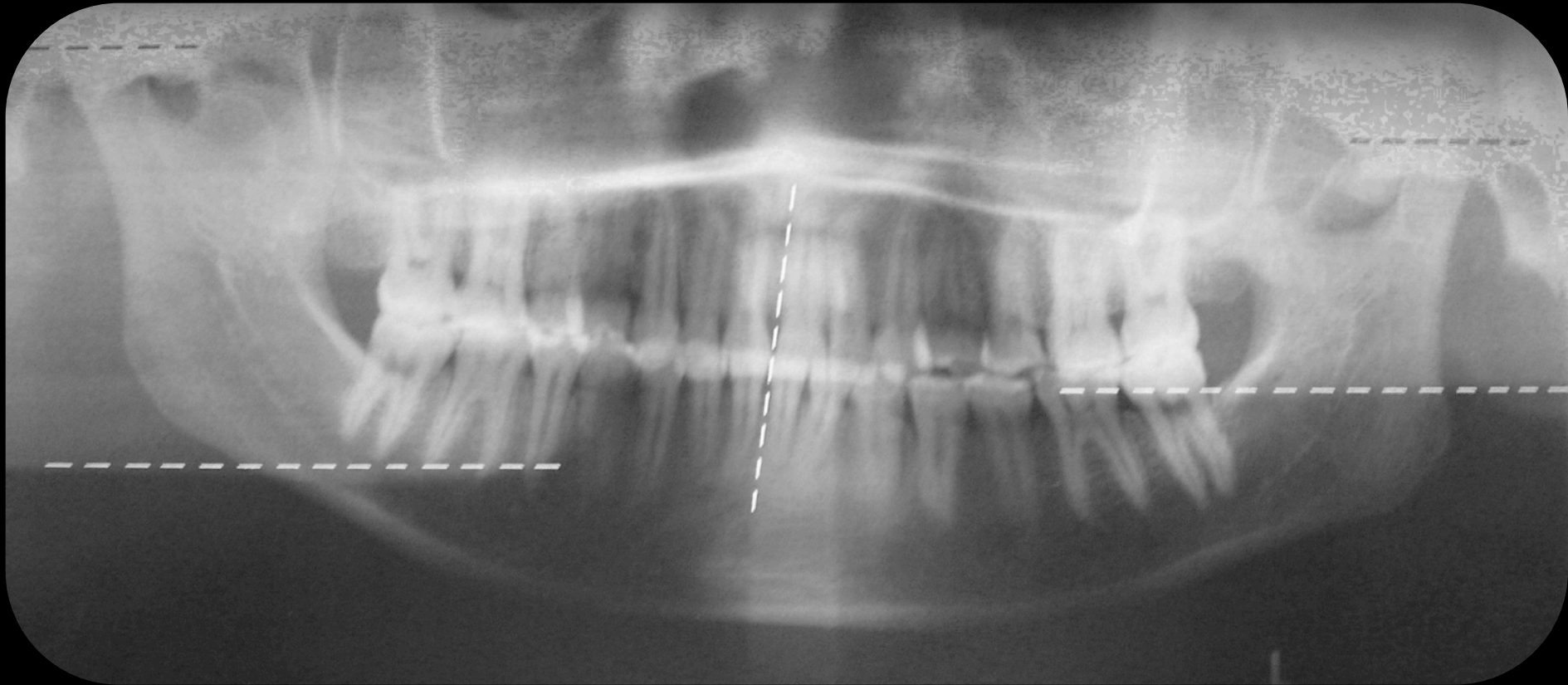
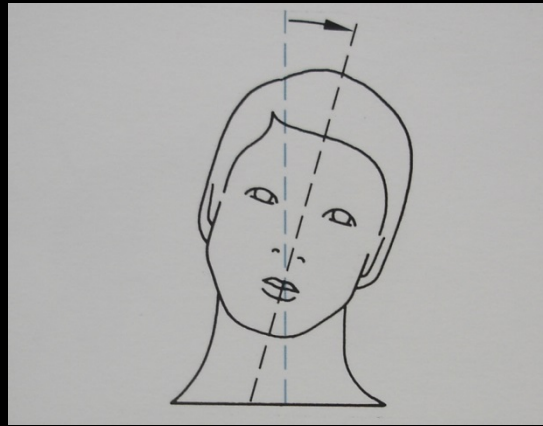




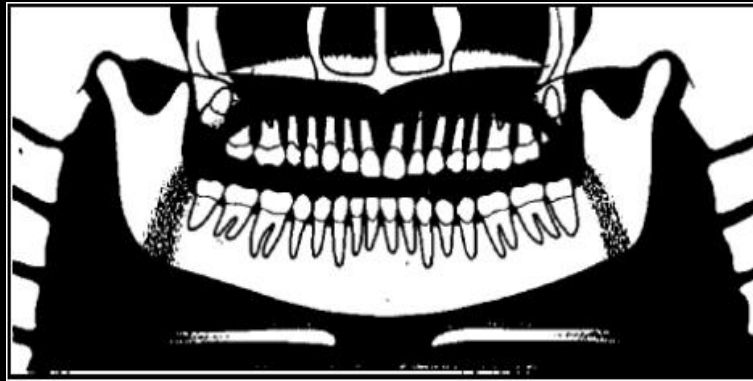




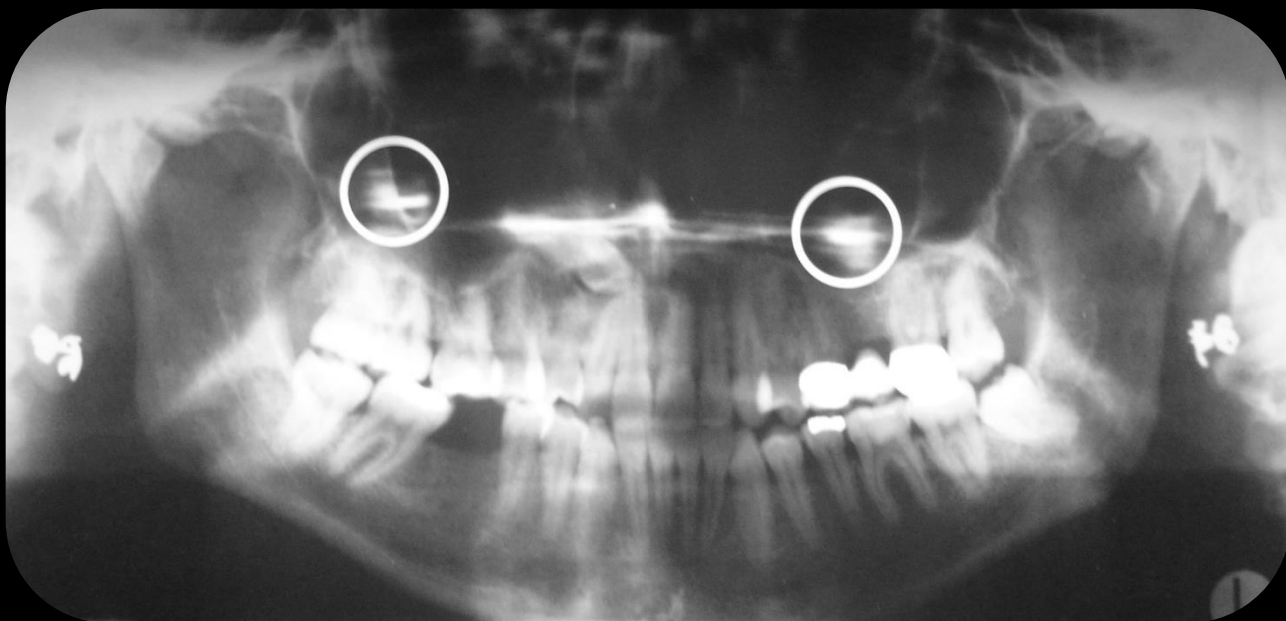
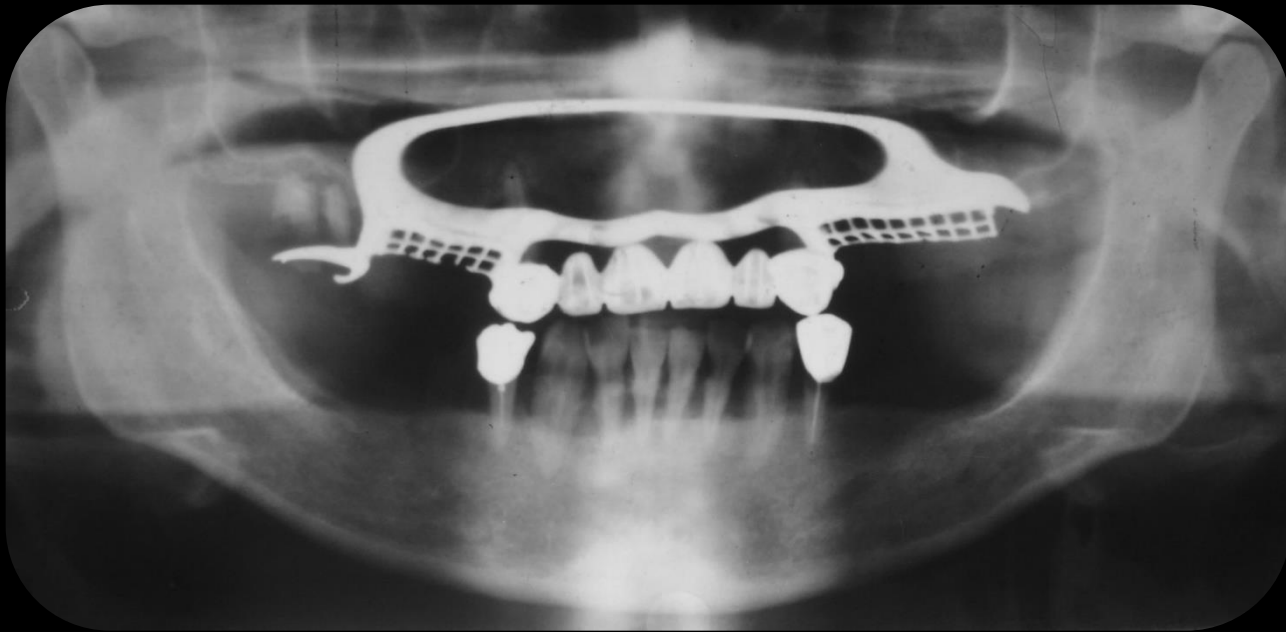












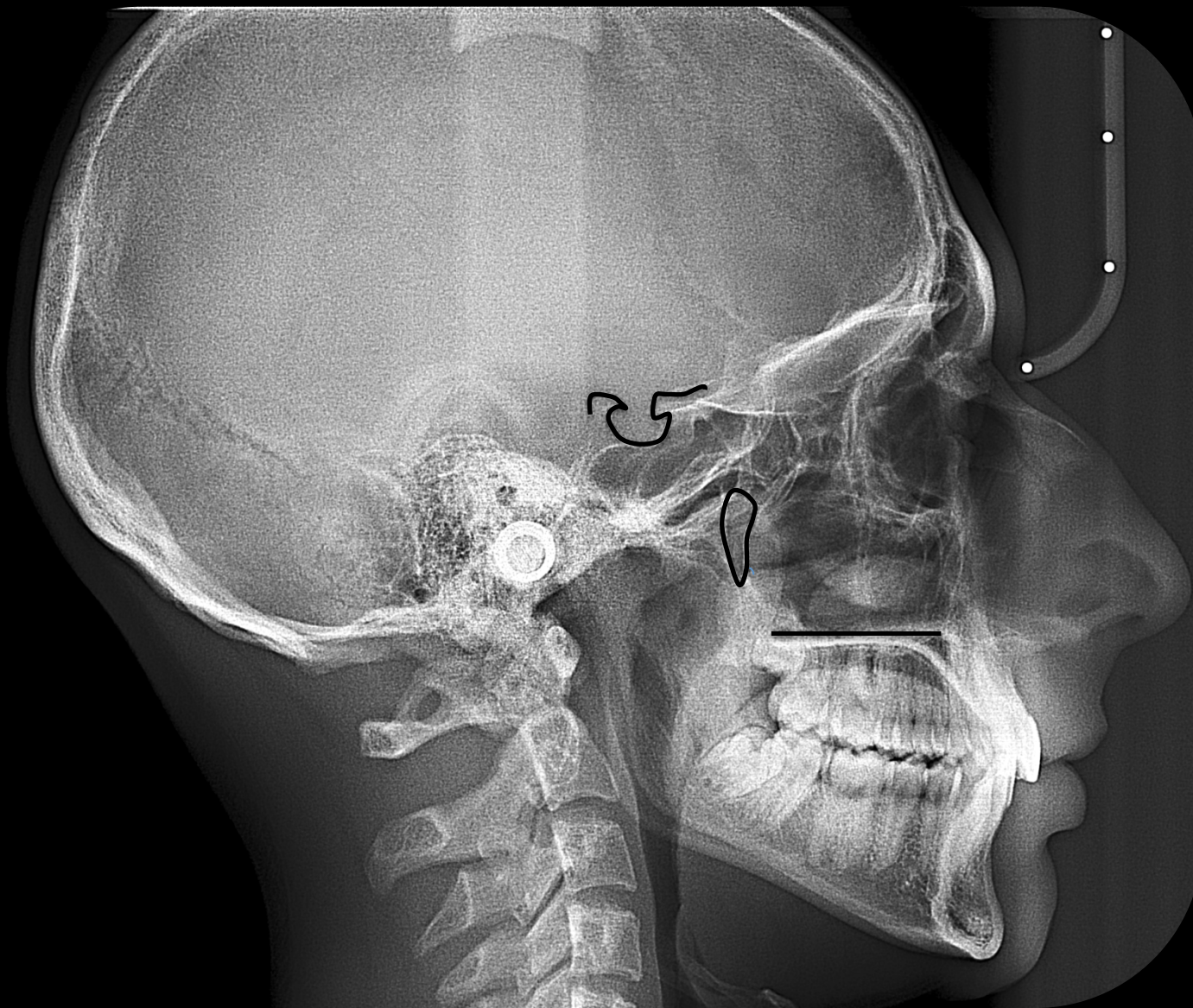
TELERADIOGRAFÍAS

Lateral



Frontal

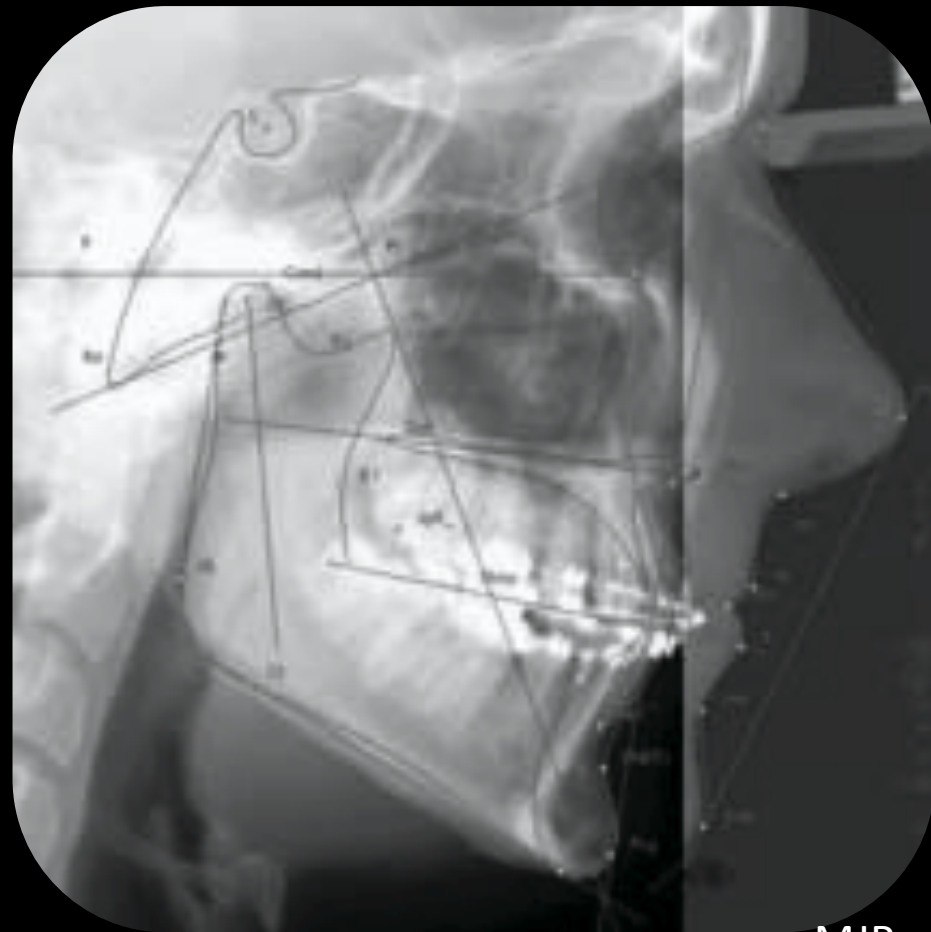








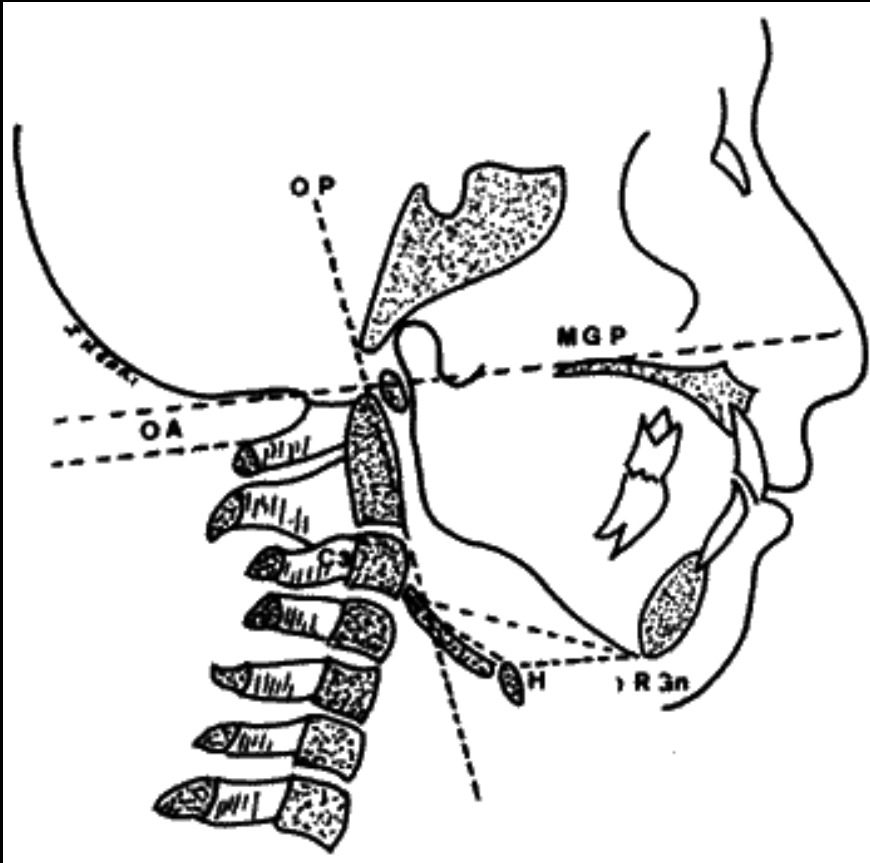
Trazados cefalométricos



Teleradiografía lateral de columna cervical

- Se visualiza el espacio occipito-atloideo.
- Mide relación angular entre apófisis odontoides y línea Mc. Gregor.
- Se evalúa el hueso hioides.
- Anomalías vertebrales y esqueléticas.

Telerradiografía lateral de columna cervical



Línea de Mc.Gregor
Espacio Occipito-atloideo



Carpal



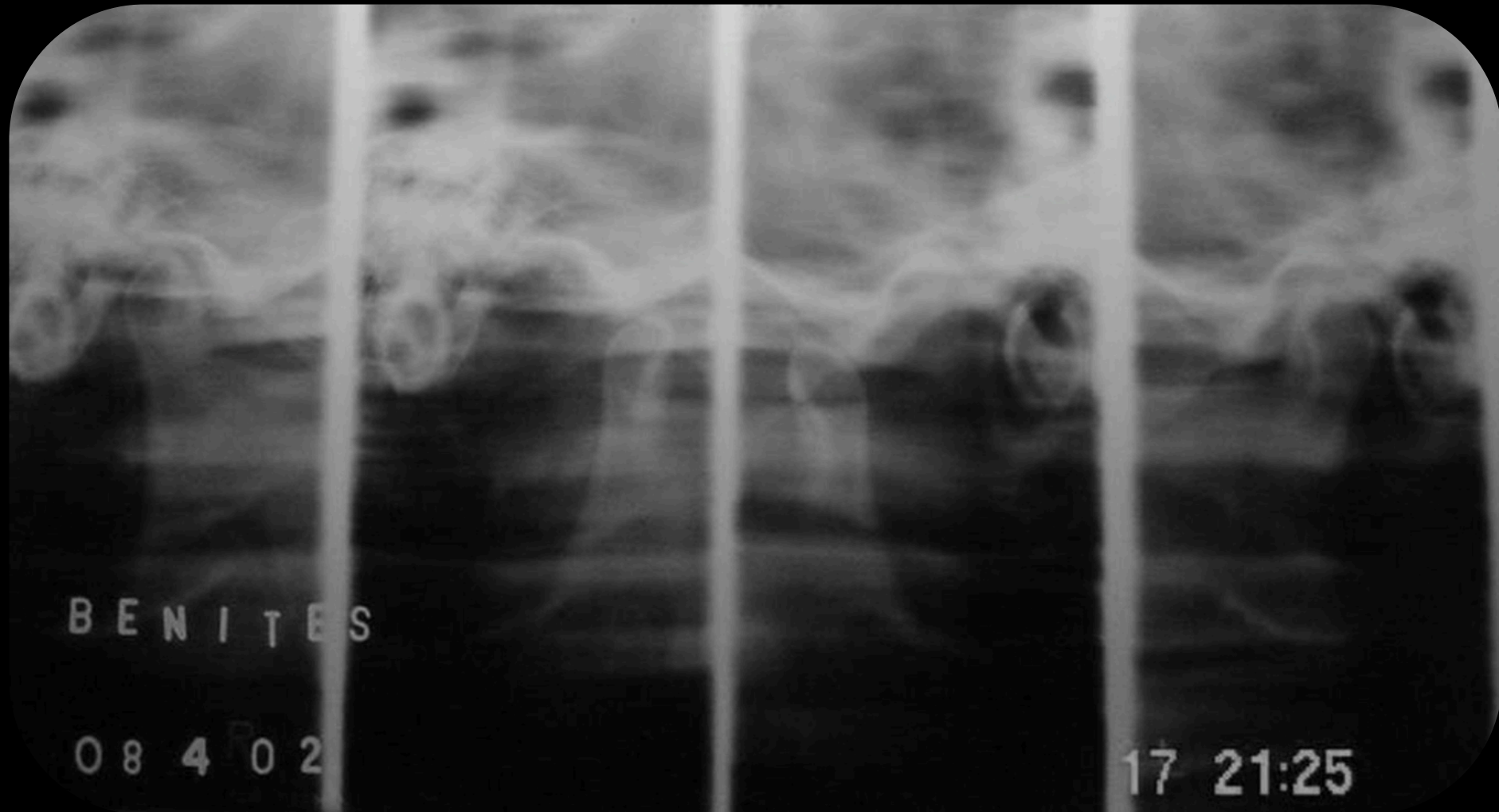


GANCHOSO
PIRAMIDAL
PISIFORME
SEMILUNAR

SESAMOIDEO
TRAPECIO
TRAPEZOIDE
GRANDE

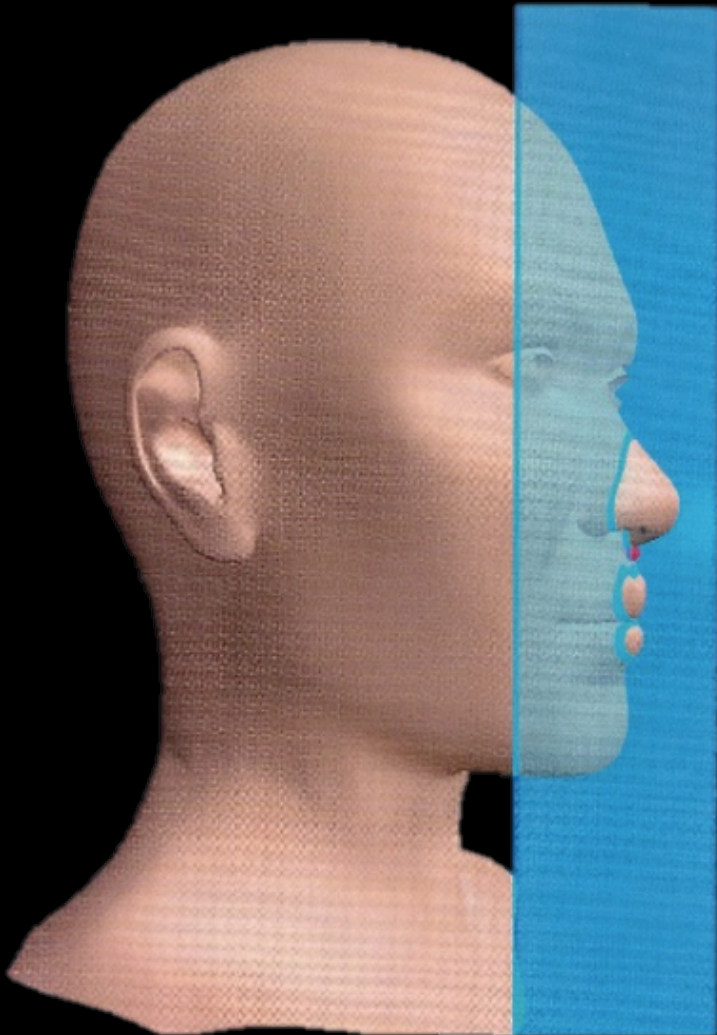


Laminografía

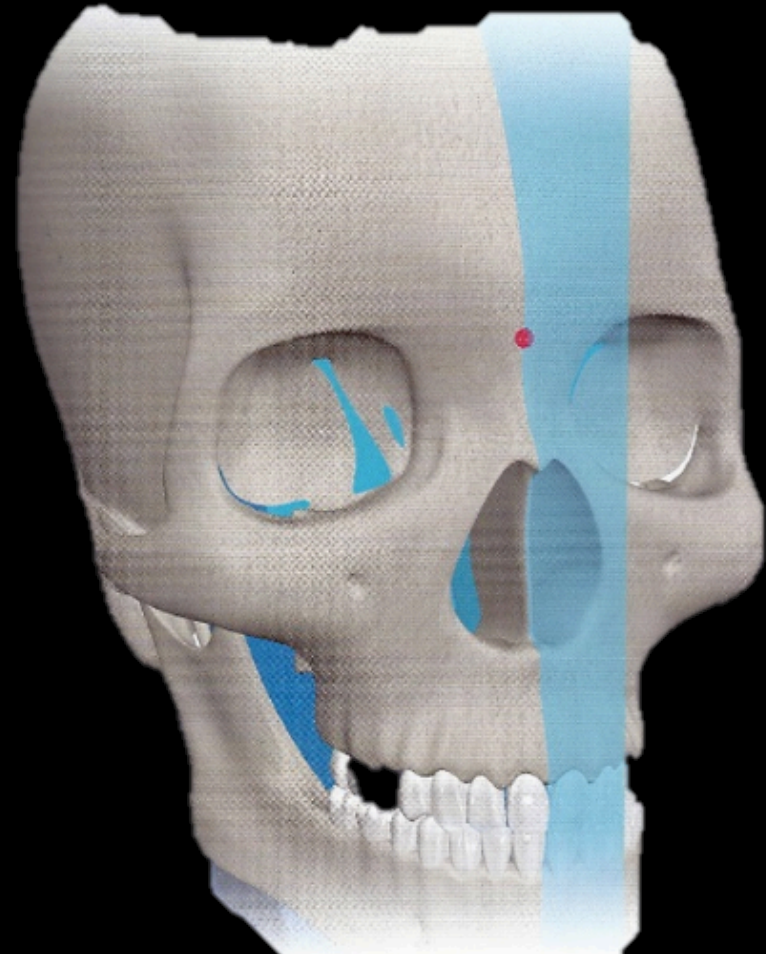


Planos

Coronal

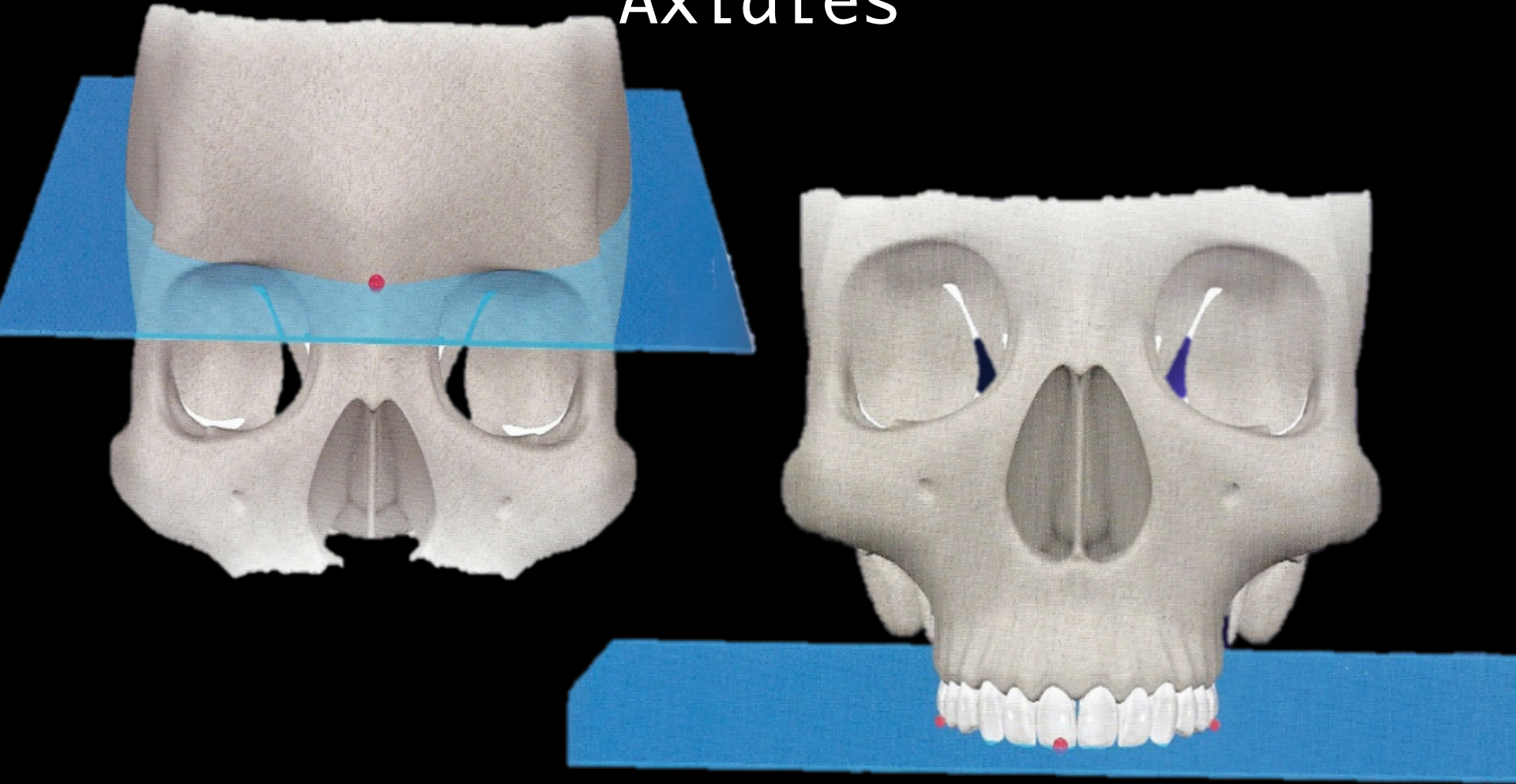


Medio sagital

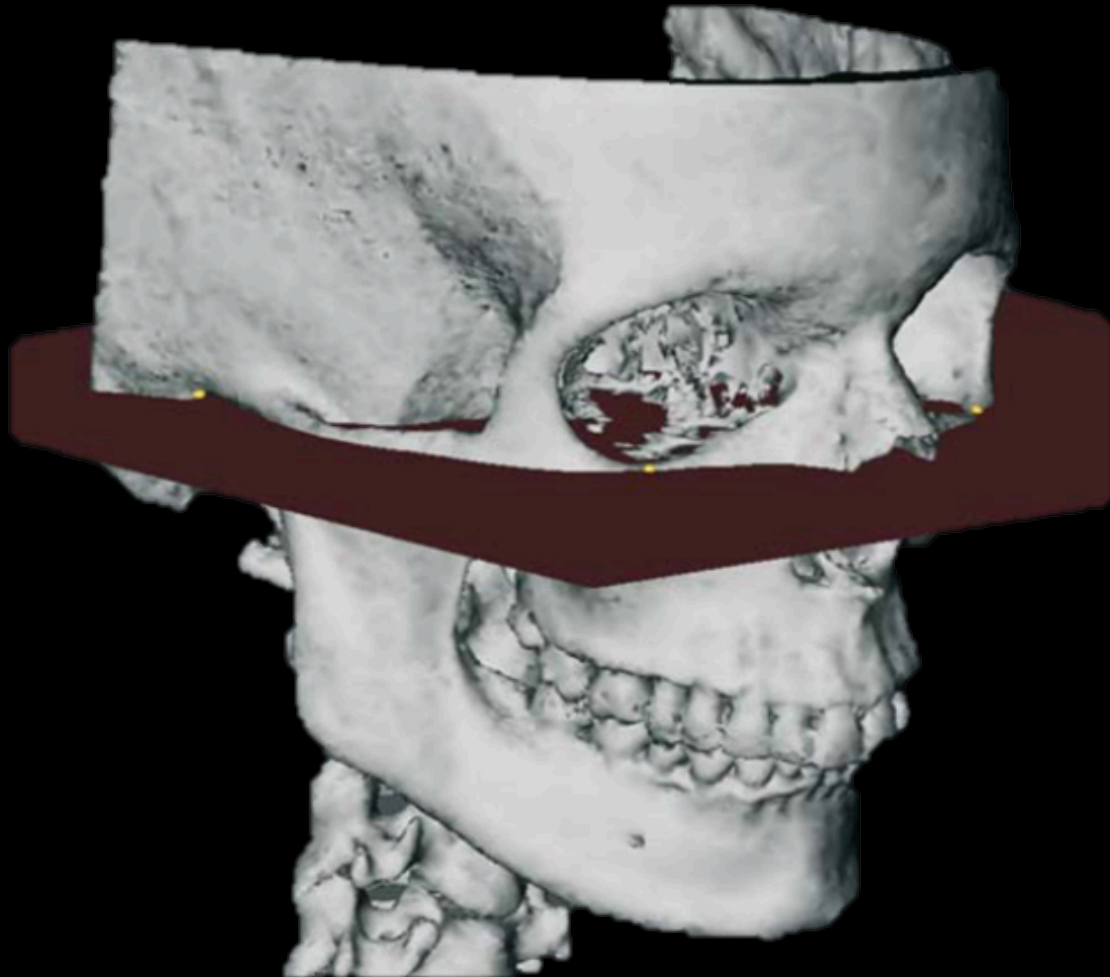


Planos

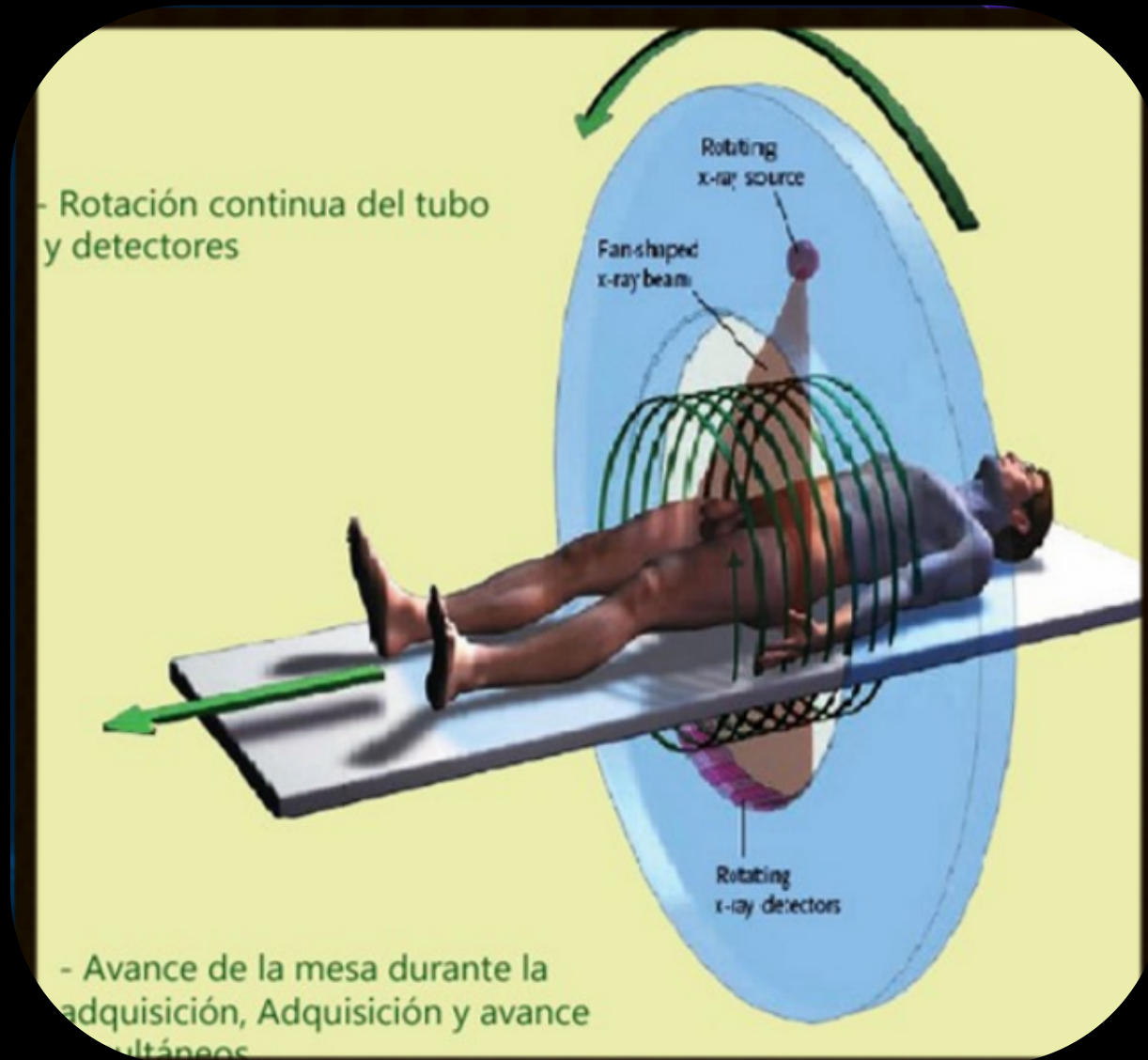
Axiales



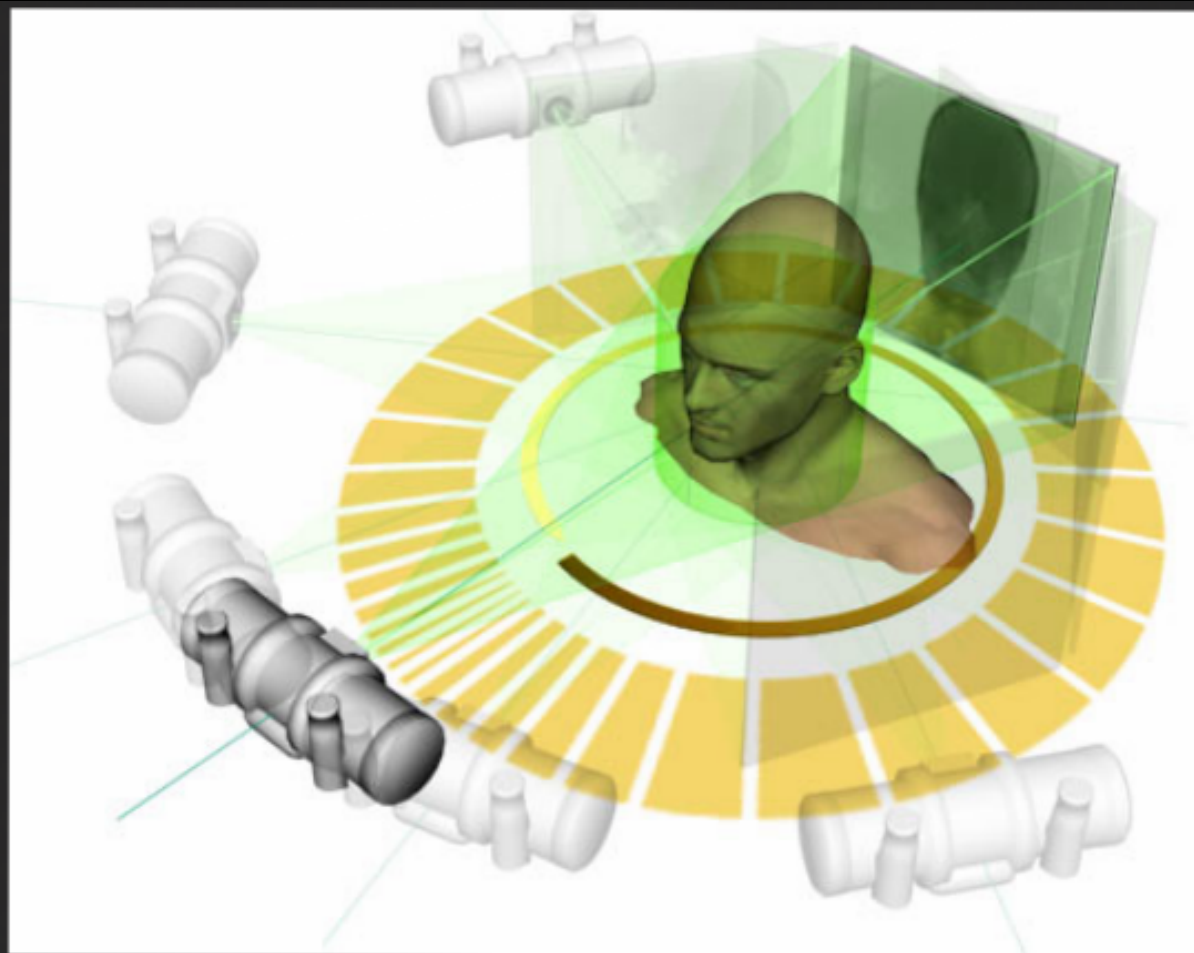
Plano de Frankfurt



Tomografía computada helicoidal



Tomografía computada Cone Beam (CBCT)



CBCT



Imágenes 3D

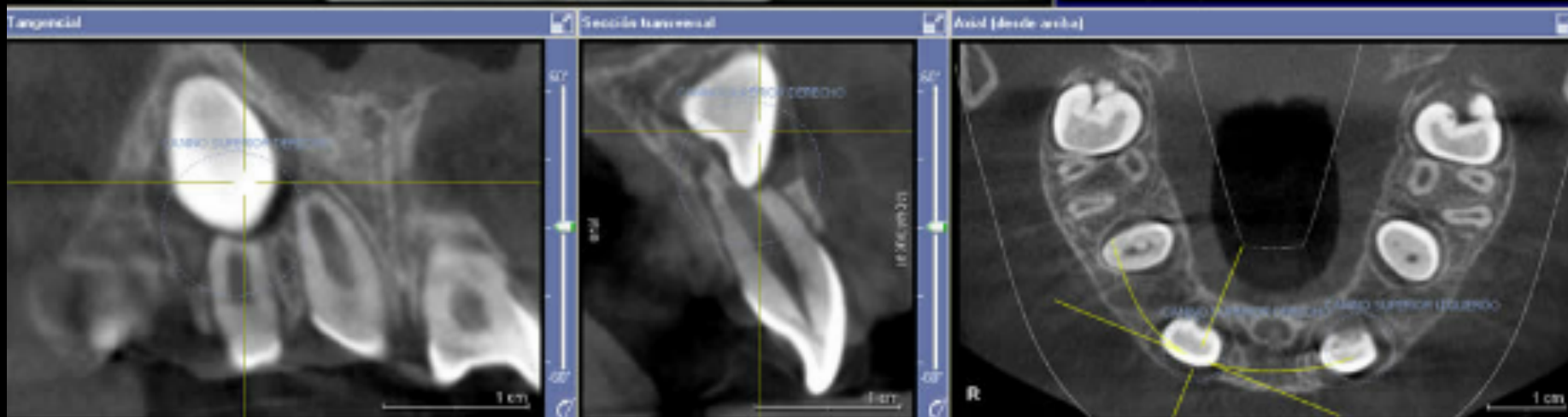
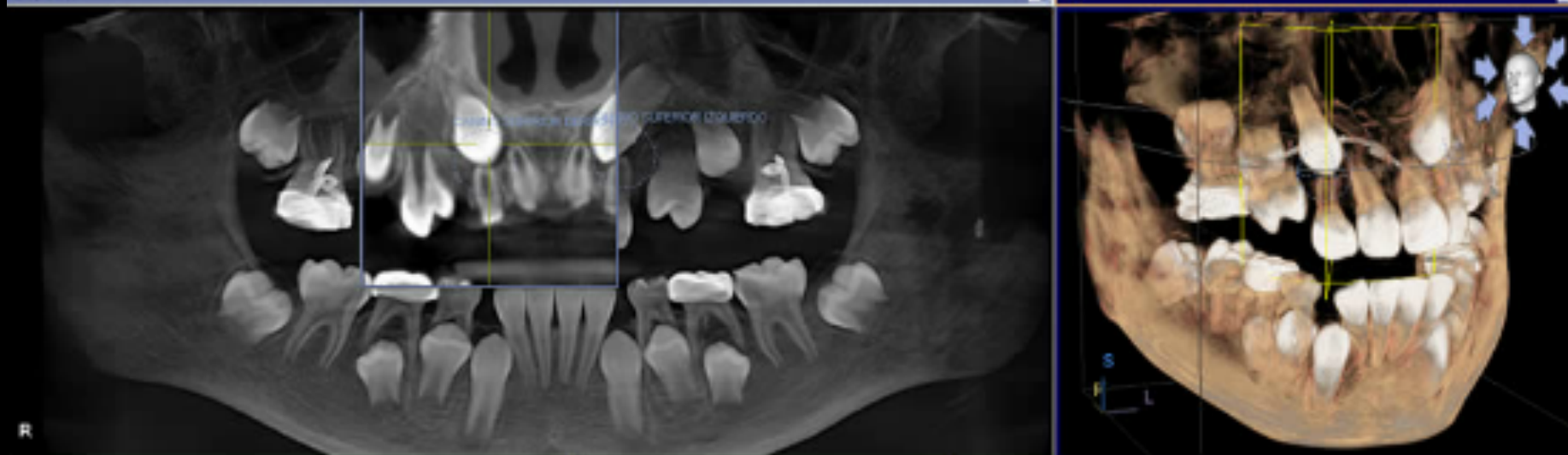
Baja dosis radiación

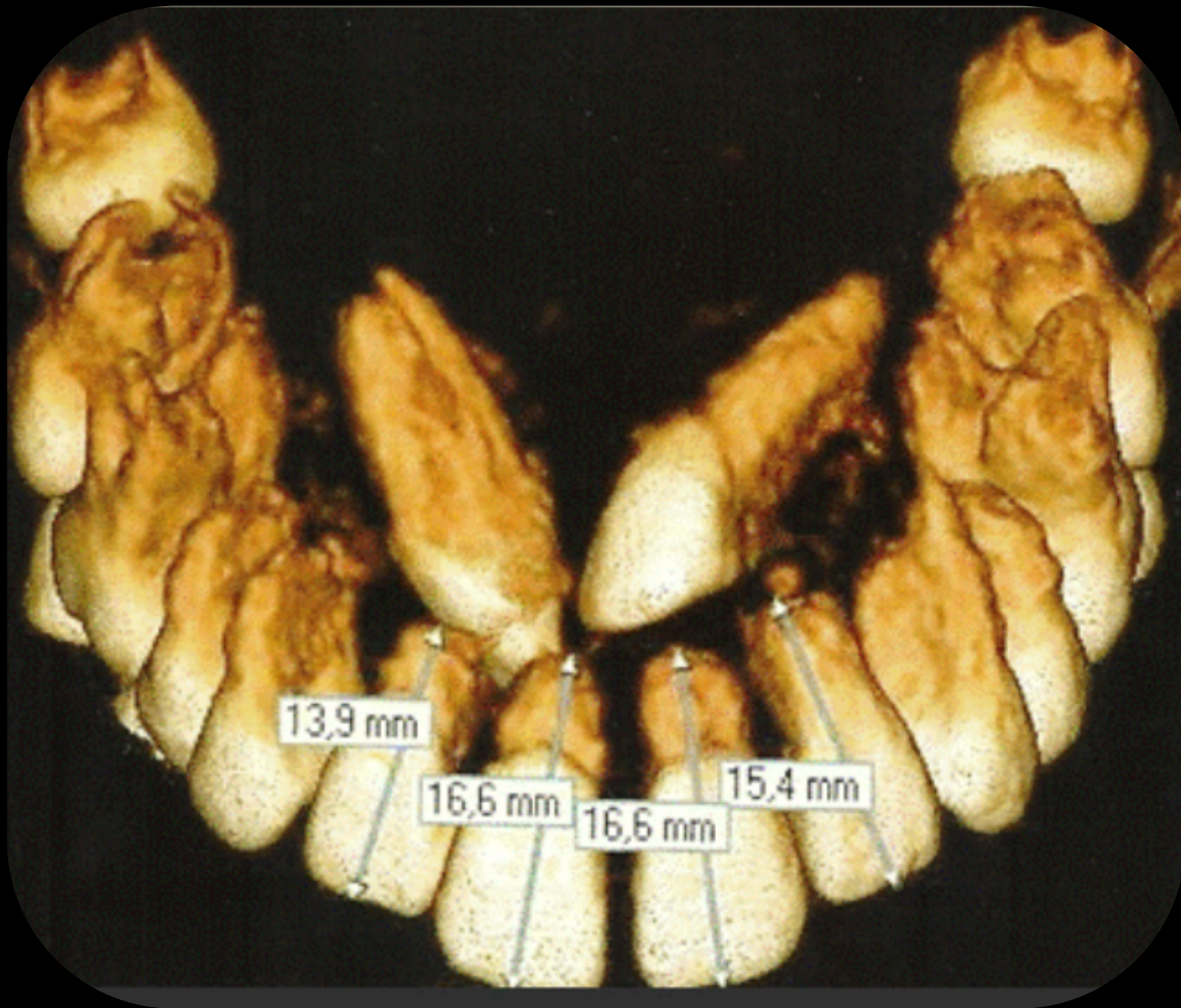
Imágenes Dicom (dcm)

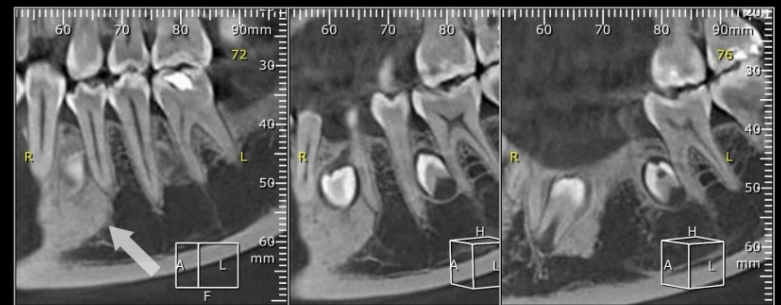
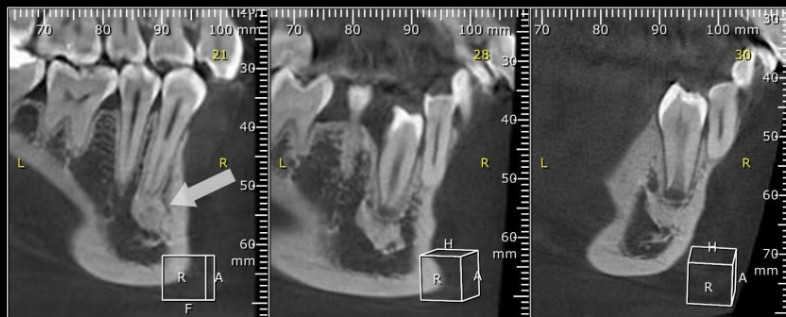
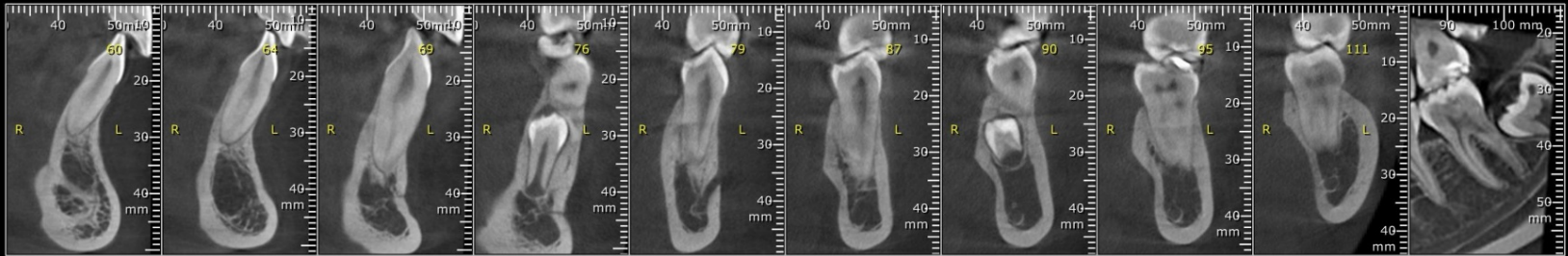
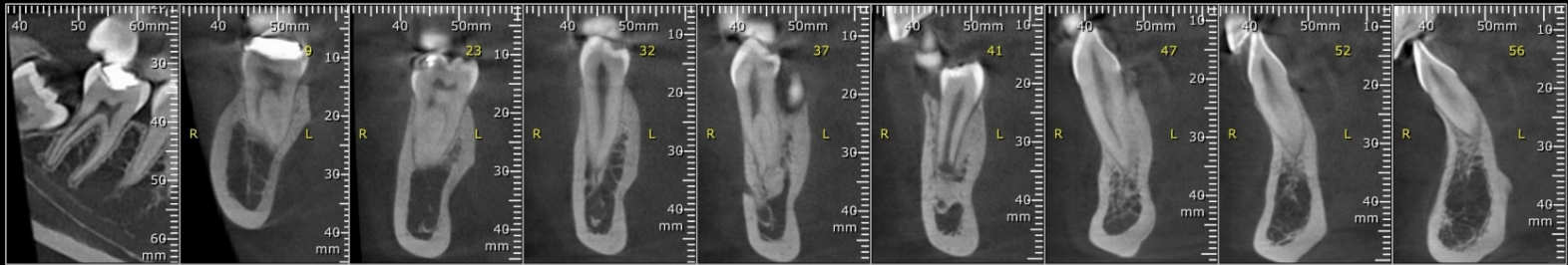
Software interactivo

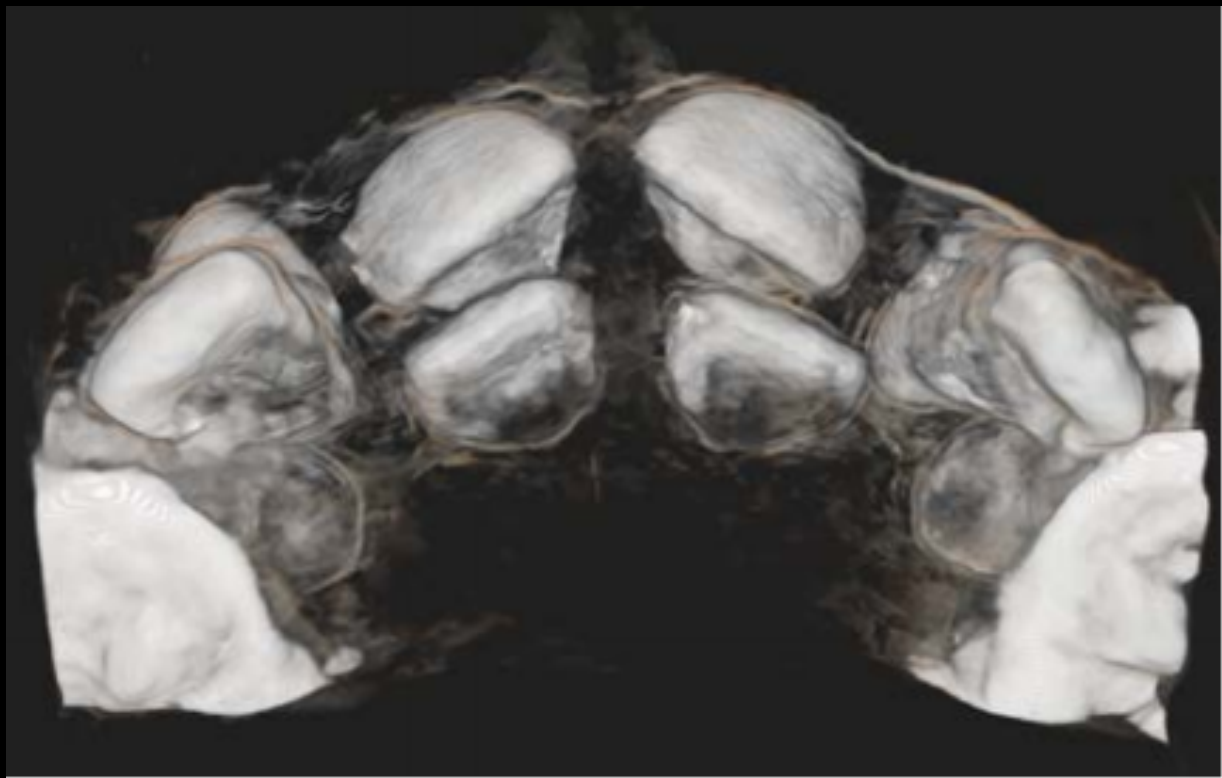
Nitidez mayor a tac convencional

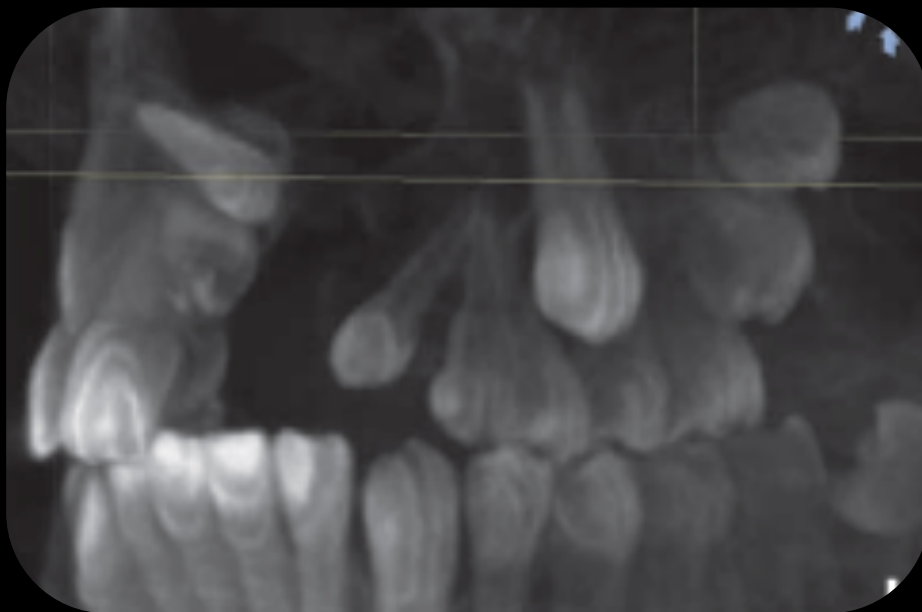
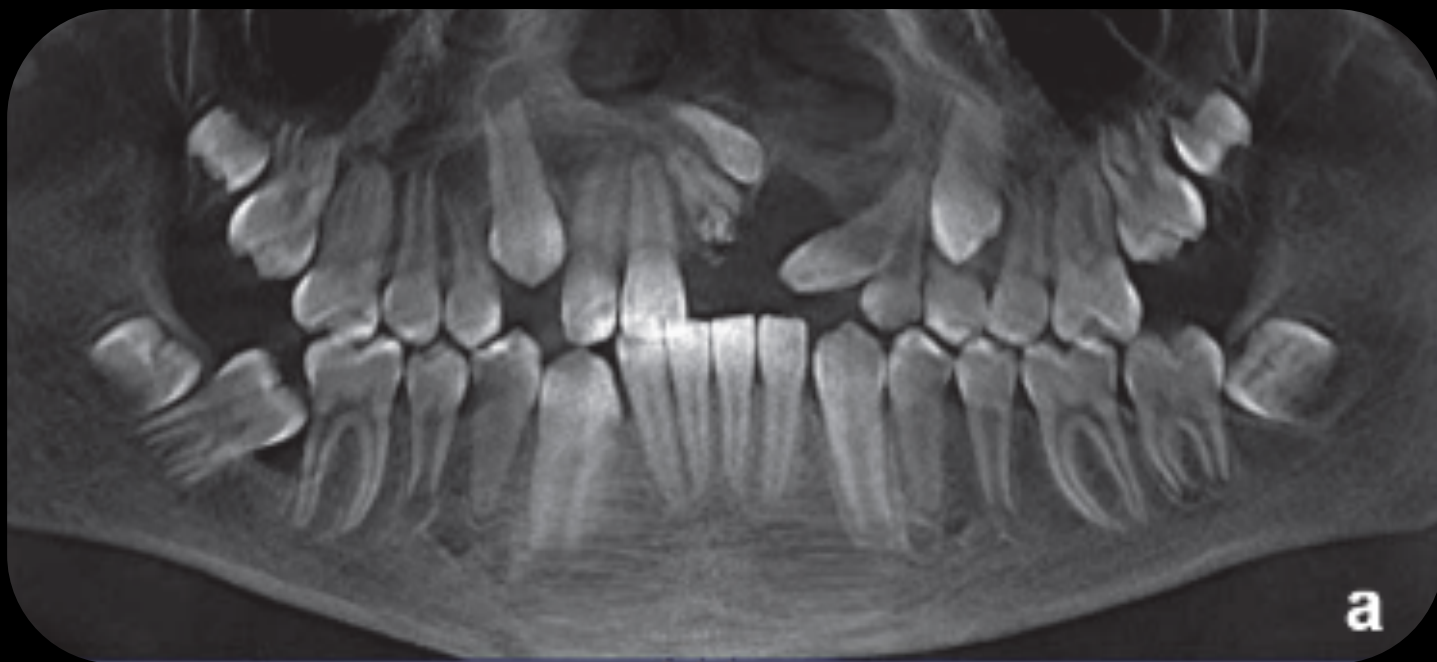
Permite planeamiento virtual (implantes y cirugías reconstructivas)

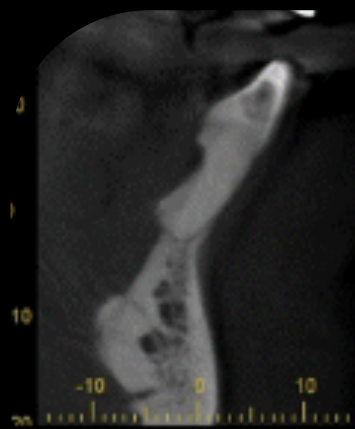




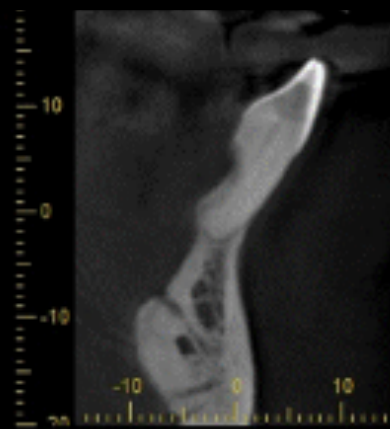




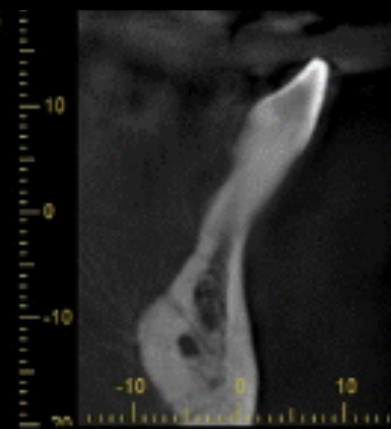




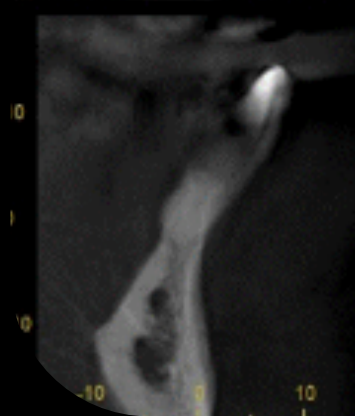
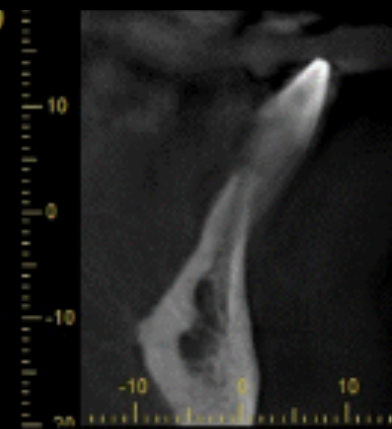
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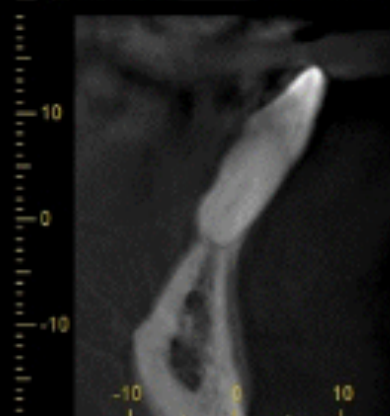
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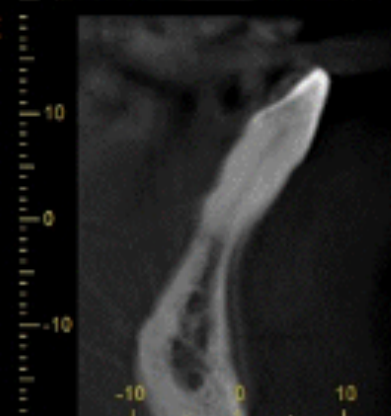
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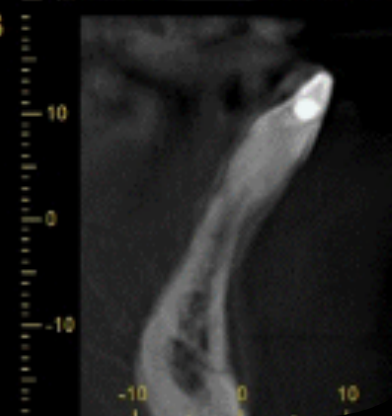
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22



23



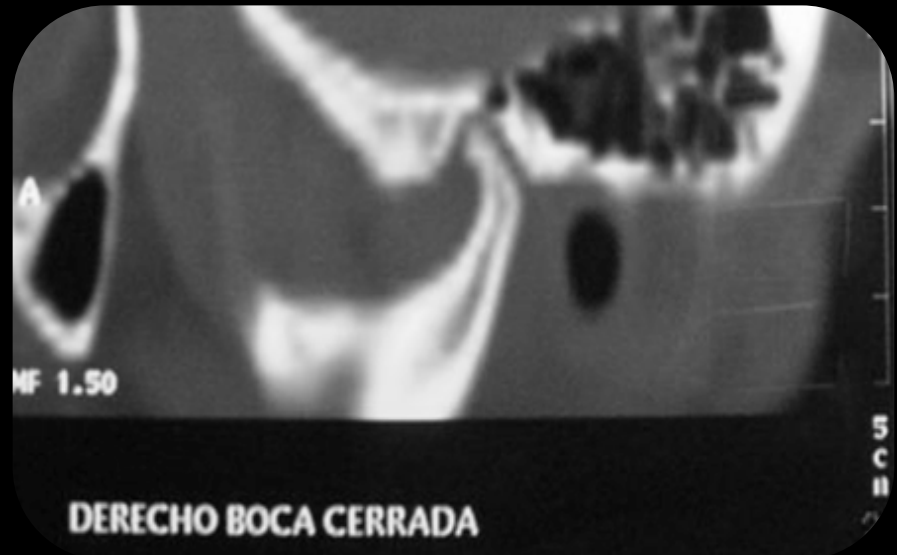
24

INDICACIONES DE CBCT EN ORTODONCIA

Evaluación de las estructuras anatómicas relevantes pre y post tratamiento ortodóncico:

- espesor de tablas óseas.
- espesor de tejidos blandos
- estado radicular.
- simetría de los maxilares.
- cavidades neumáticas.
- posibilidad de incorporar software de planificación de tratamiento.
- cefalometría 3D.
- modelos estereolitográficos.

Tomografía computada de ATM



ACREU LUCIANO M-23

15527

13-JUN-2002

HOSPITAL
SOMATOM

spin +0

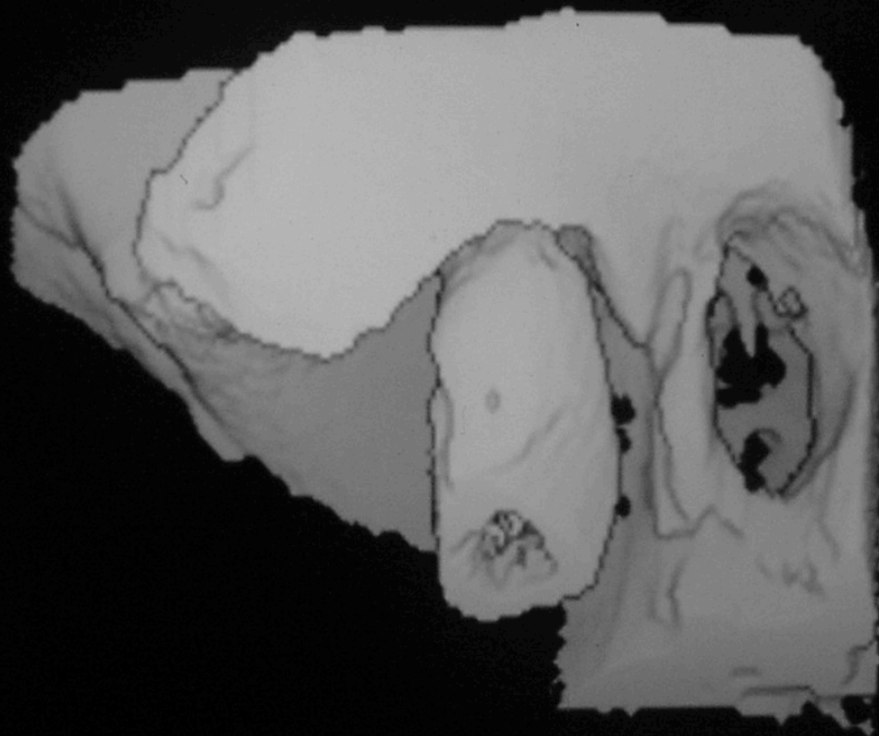
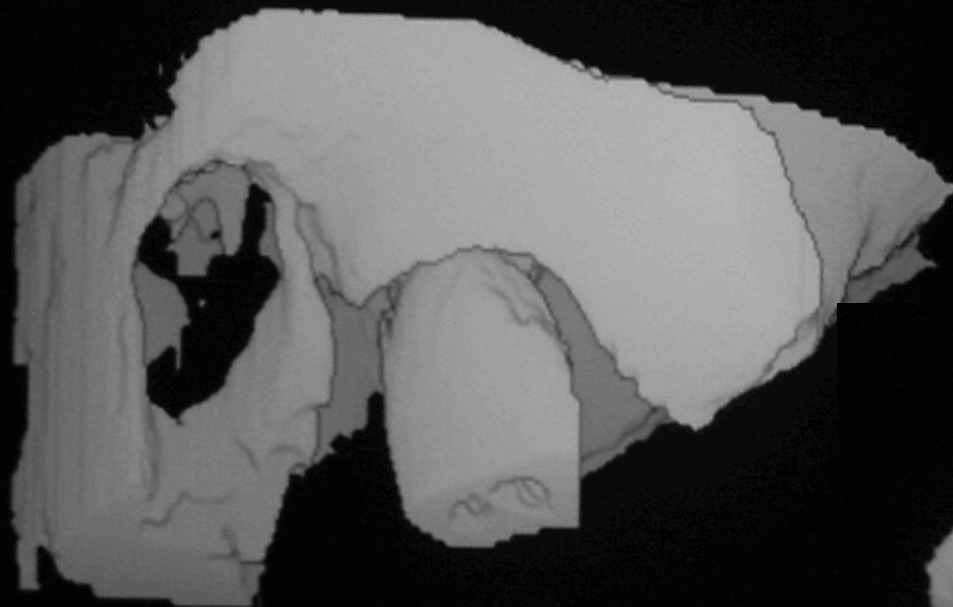
tilt -90



BOCA ABIERTA

W
C

ATM derecha



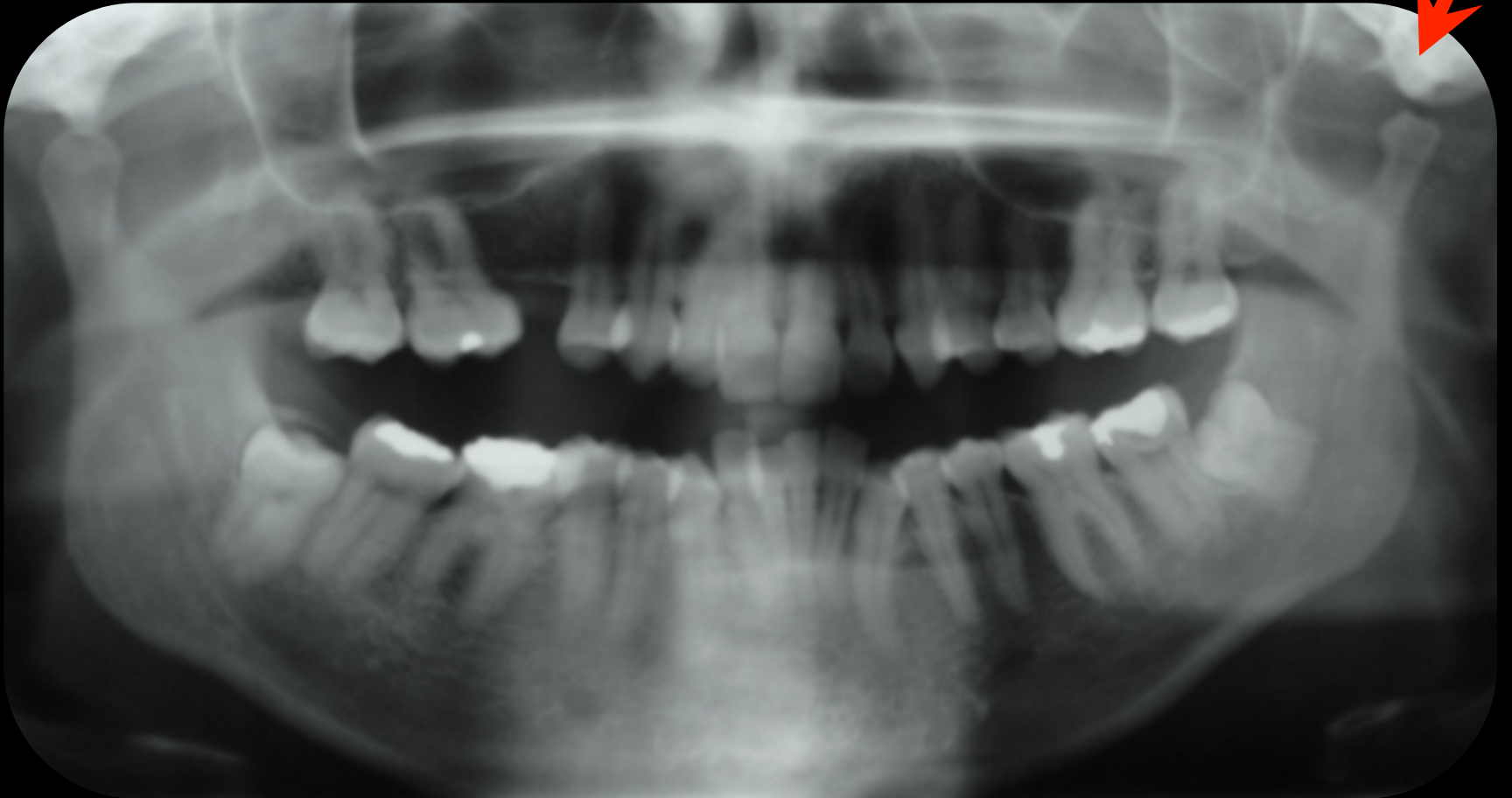




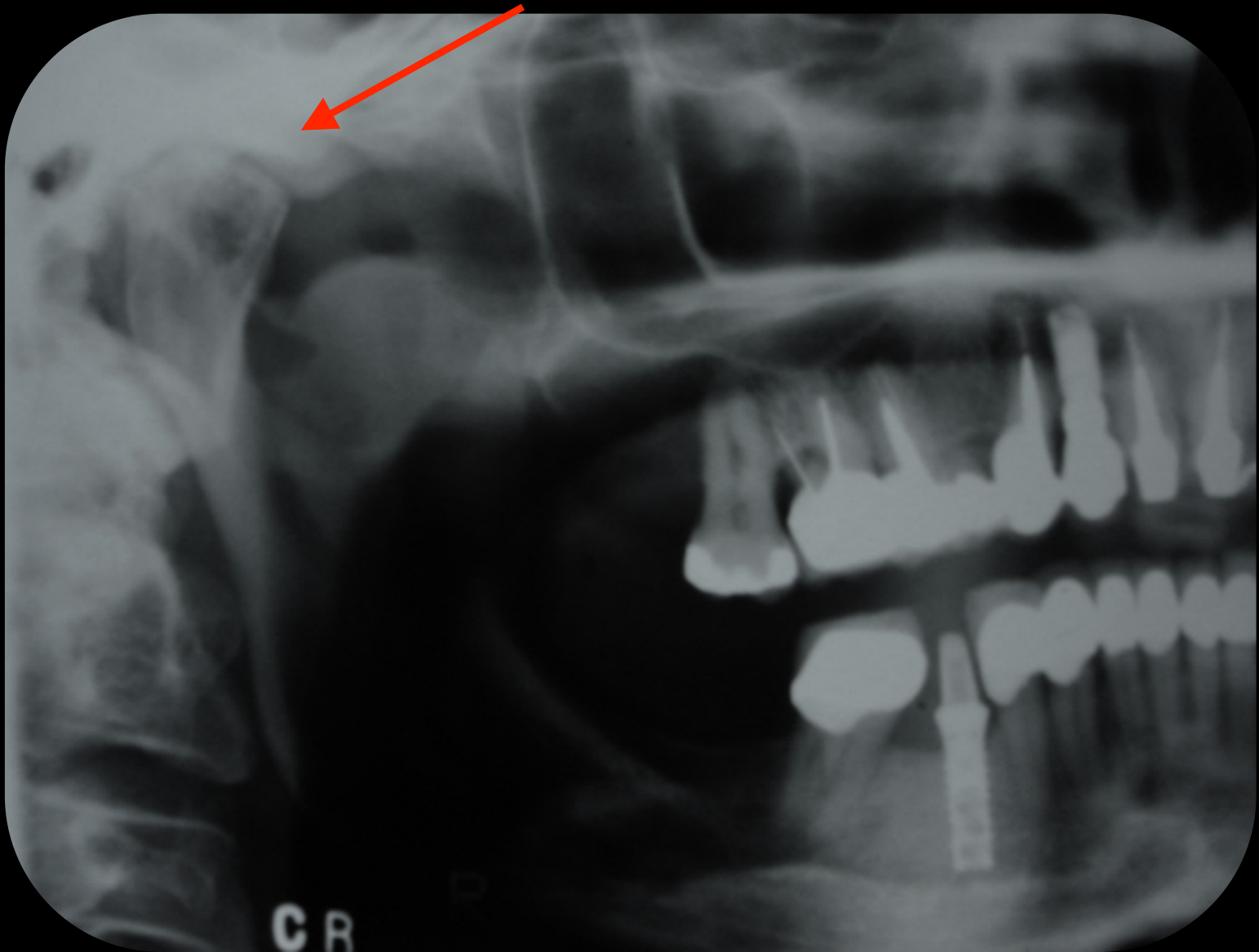
RMN

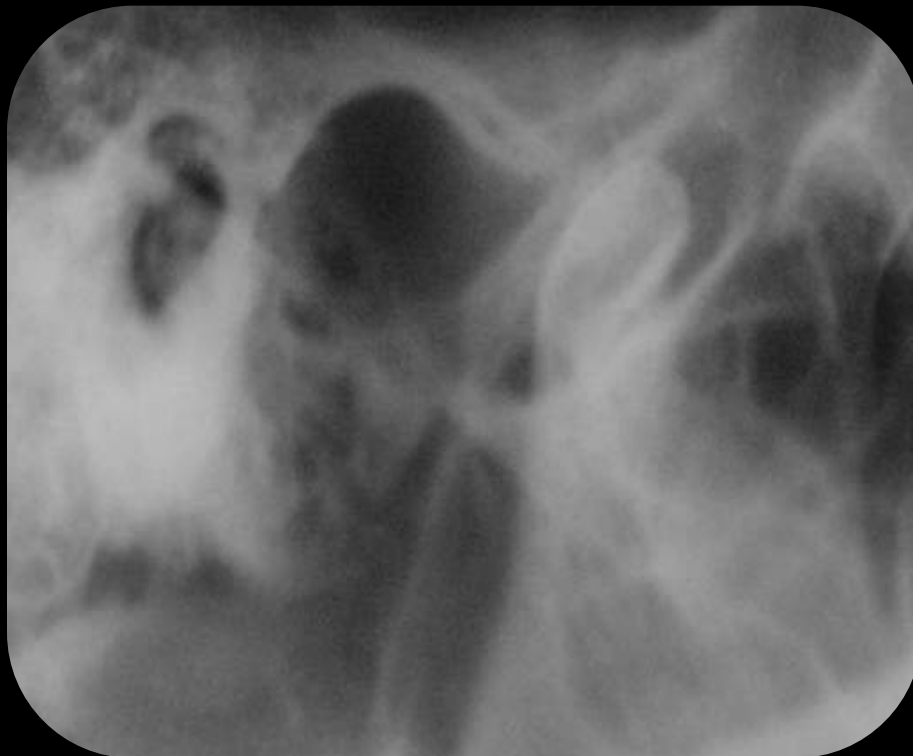


Hipoplasia de cóndilo

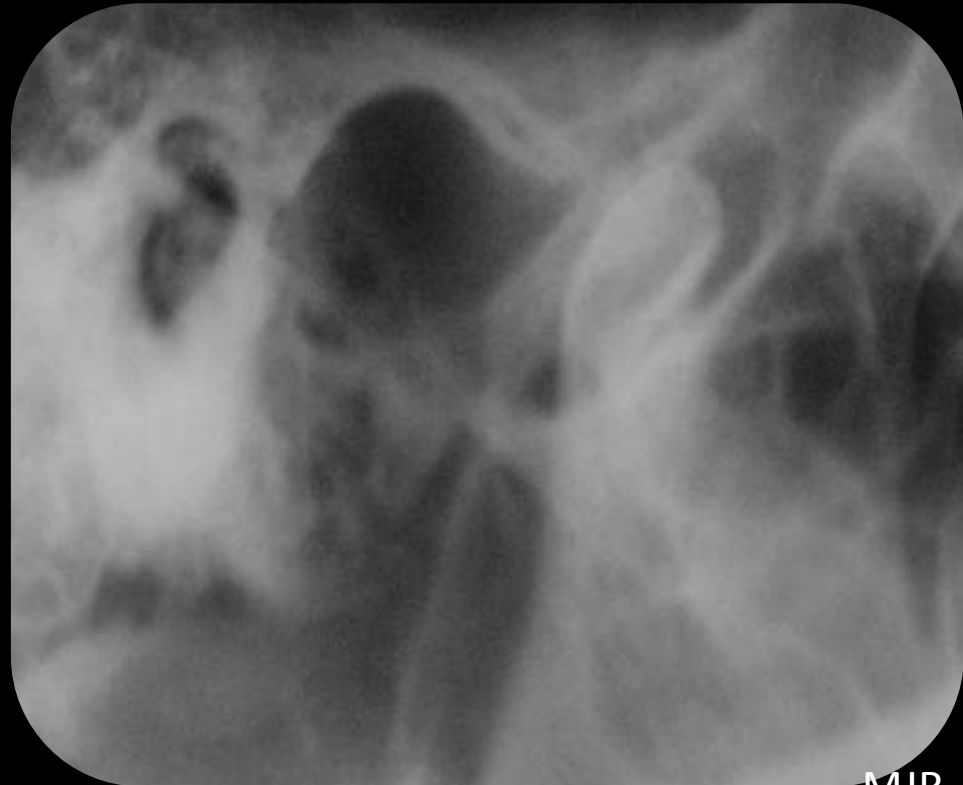


Hiperplasia de cóndilo

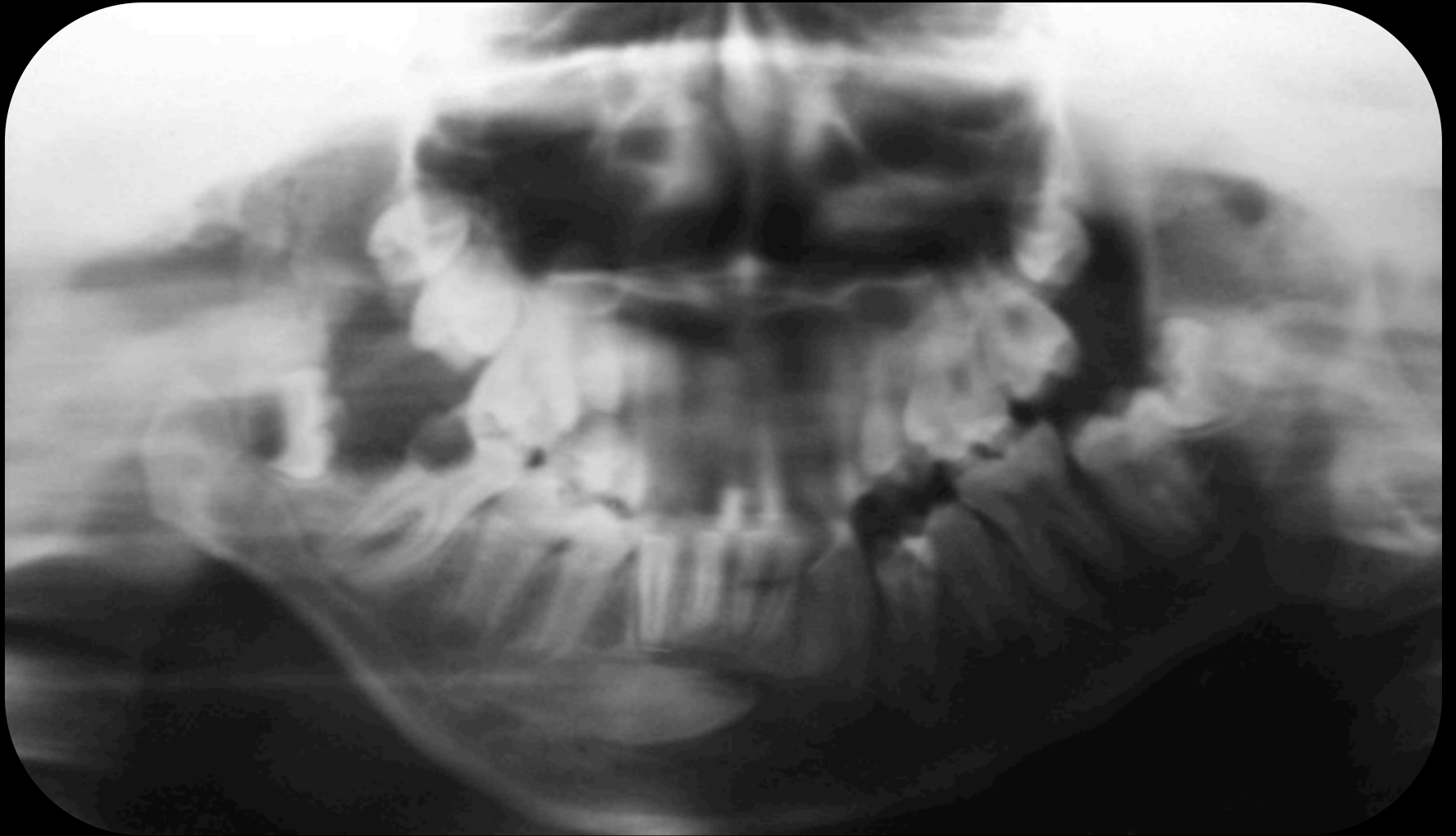


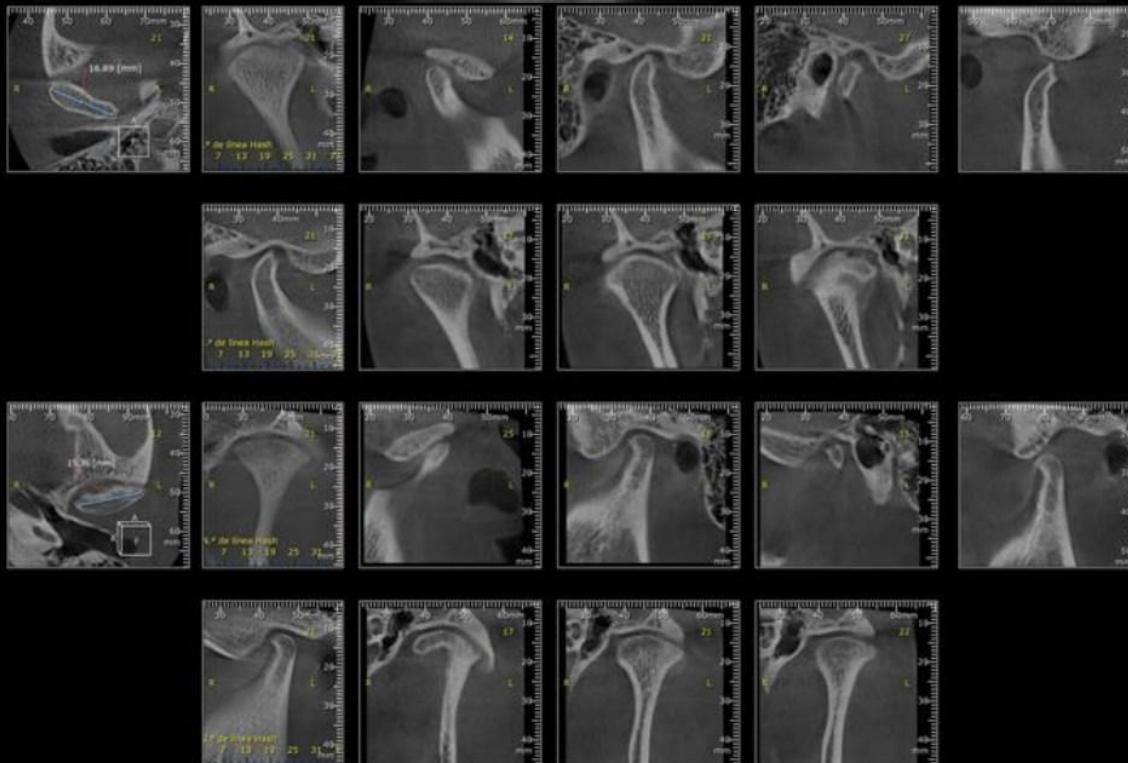


Apertura máxima que produce
una luxación



Agnesia de cóndilo





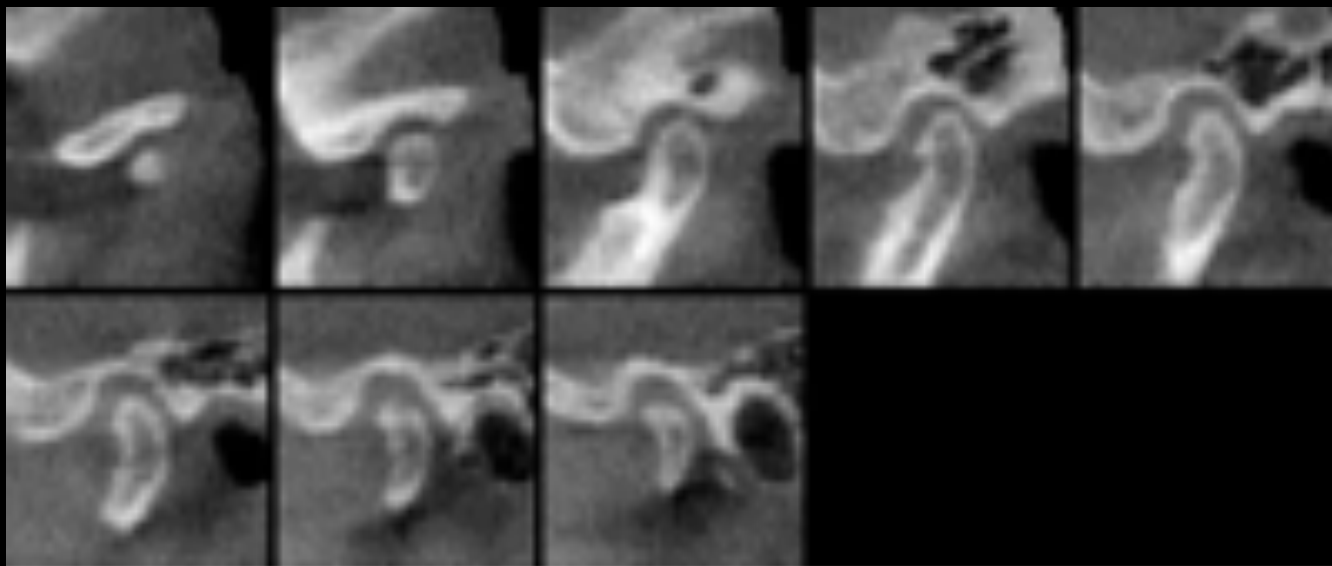
Osteocondroma.



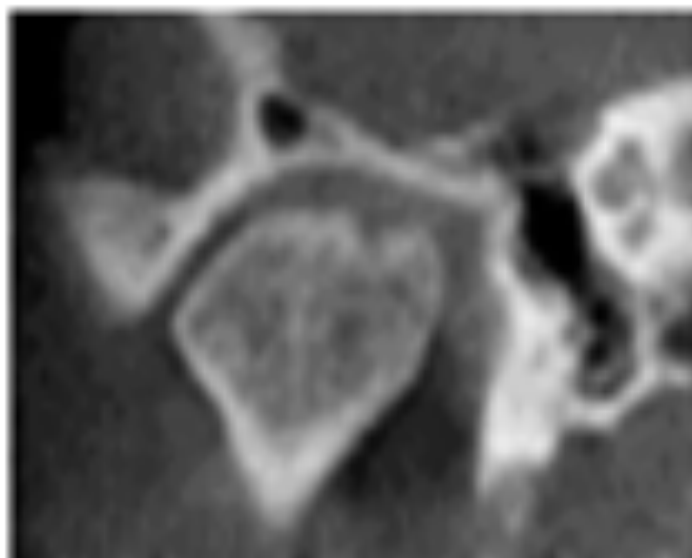




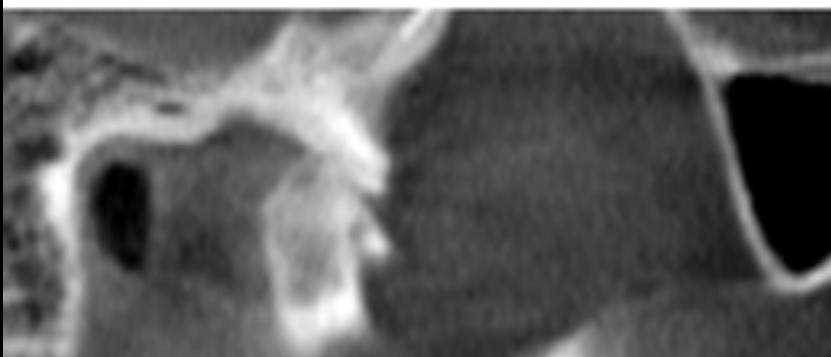
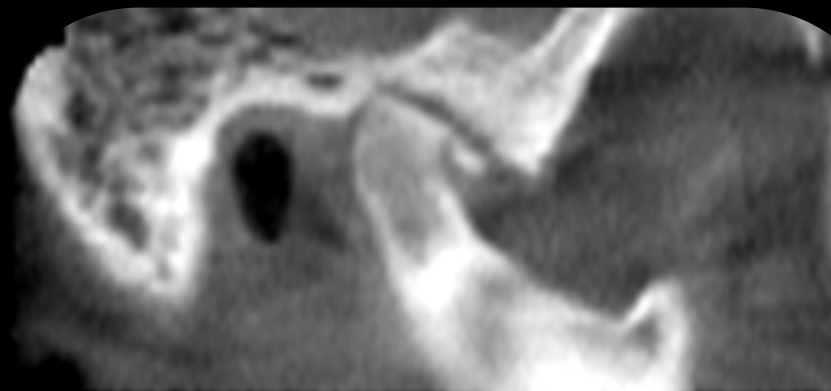




a

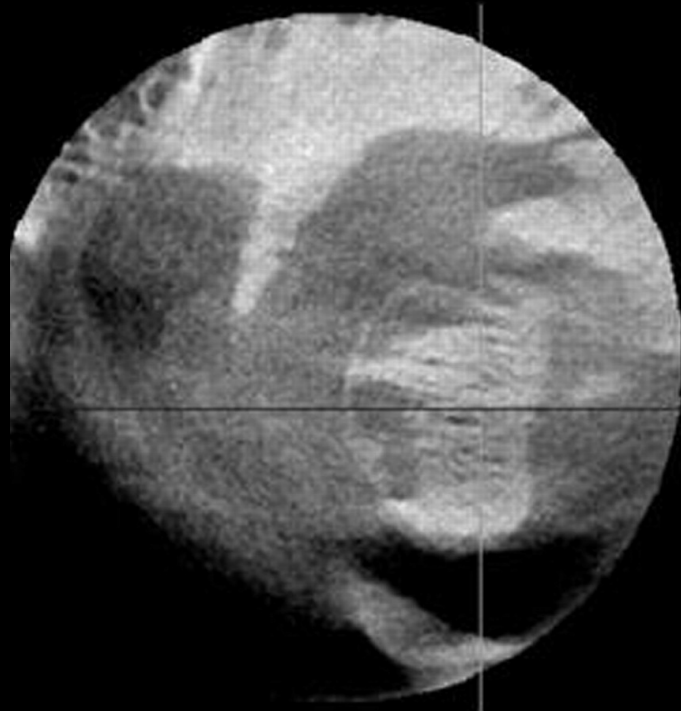


b



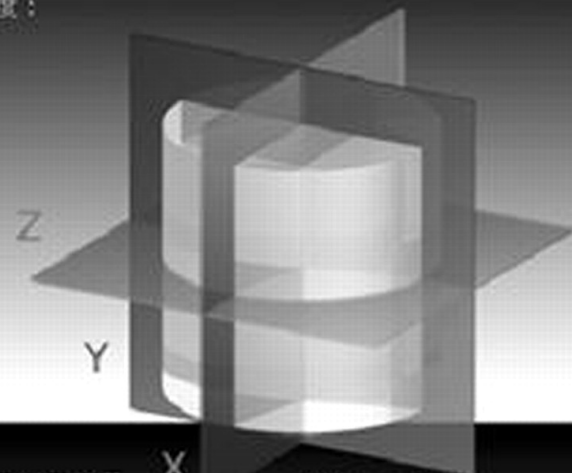
a





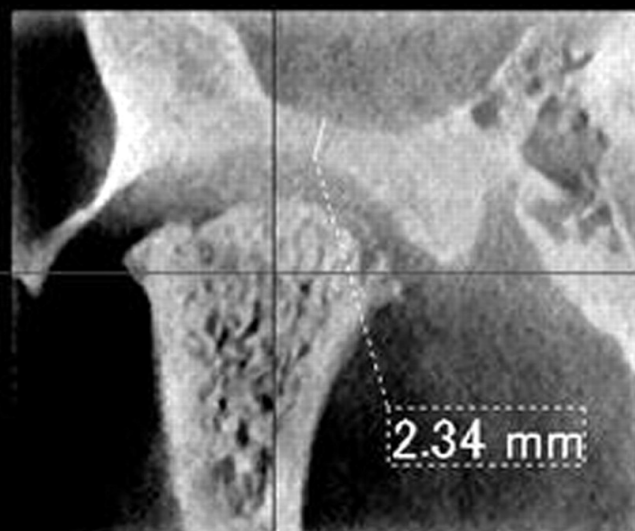
履歴: M
回転軸:
角度:

初期角度: 0.0 deg.
スライス間隔: 1.000 mm

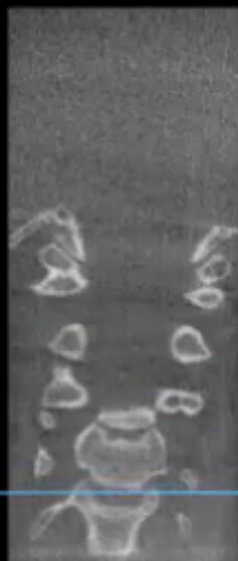


スライス位置
Z 0.000 mm
Y -2.351 mm
X +8.264 mm

管電圧: 80 kV
管電流: 8.2 mA
フィルタ: Cu:0.00mm
部位: ARCH_M



Coronal



33
MPR
TH: 0 [mm]
Filter Off



R A F

Sagittal

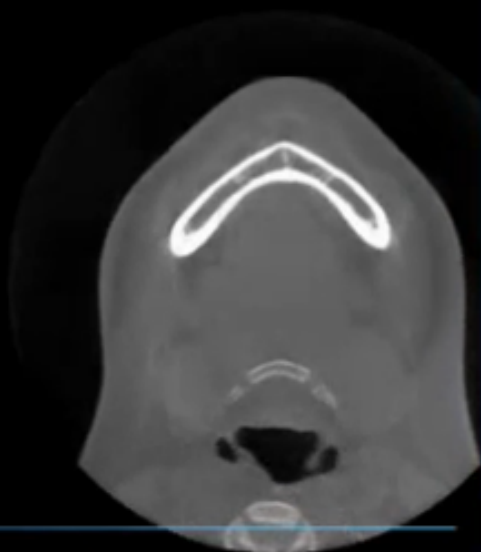


444
MPR
TH: 0 [mm]
Filter Off



A L F

Axial



442
MPR
TH: 0 [mm]
Filter Off



R A F

3D

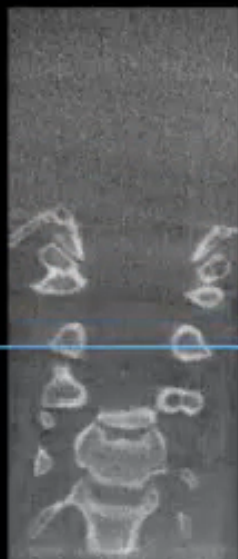


H F A P L R
VR
Overlay Off



R H A

Coronal

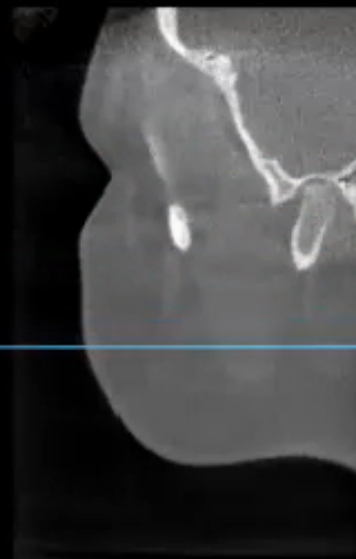


33
MPR
TH: 0 [mm]
Filter Off



R A
F

Sagittal

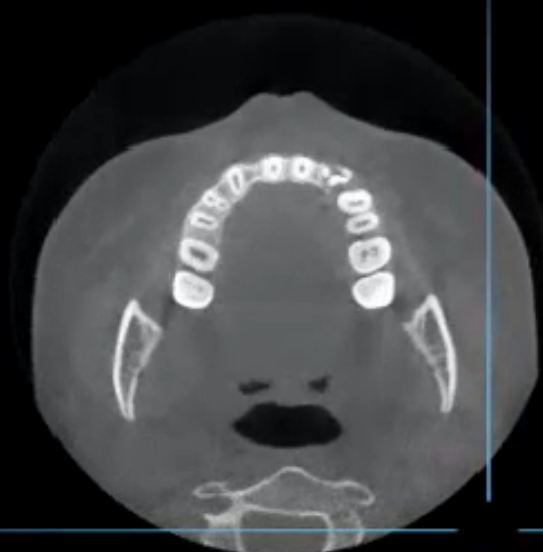


444
MPR
TH: 0 [mm]
Filter Off



A IL
F

Axial



312
MPR
TH: 0 [mm]
Filter Off



A
R F

3D

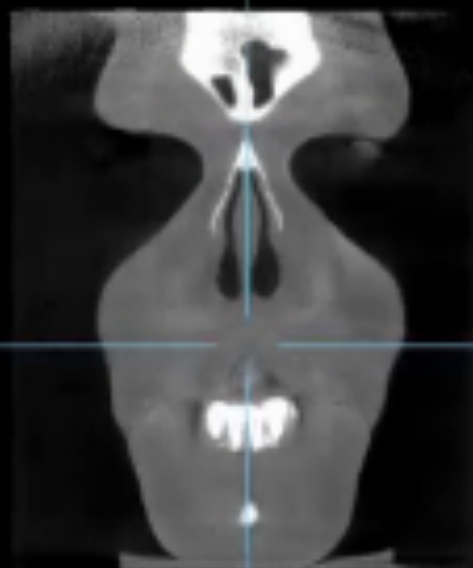


H F A P L R
VR
Overlay Off



H
R A

Coronal



385
HPR
Th: 0 [mm]
Filter Off



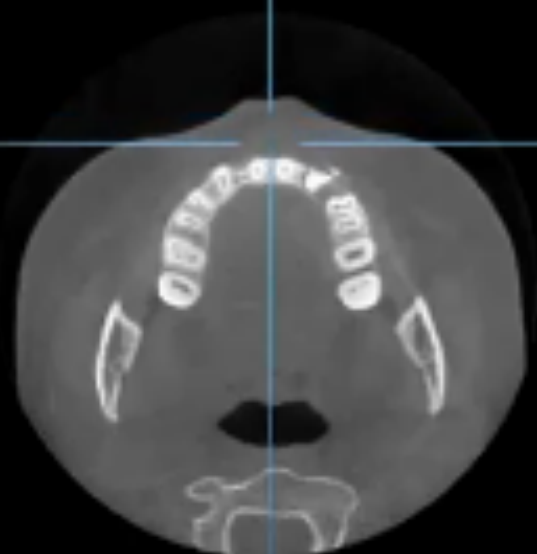
Sagittal



260
HPR
Th: 0 [mm]
Filter Off



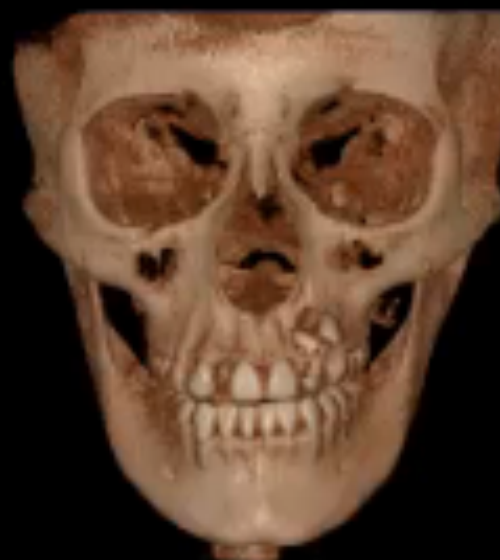
Axial



306
HPR
Th: 0 [mm]
Filter Off



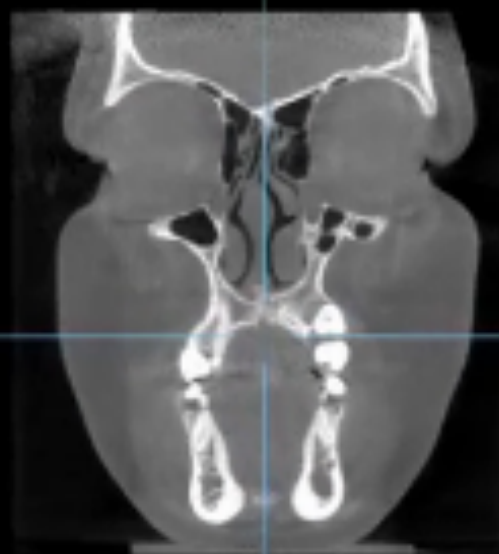
3D



H P A B L R
VR
Overlay Off



Coronal



341
MPR
Th: 0 [mm]
Filter Off

4 cm



Sagittal

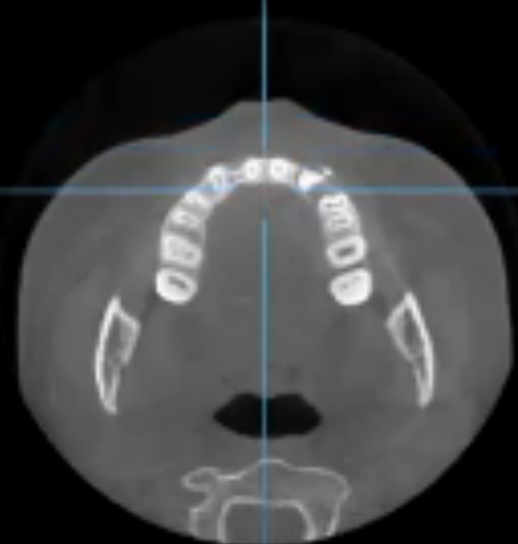


260
MPR
Th: 0 [mm]
Filter Off

4 cm



Axial



306
MPR
Th: 0 [mm]
Filter Off

4 cm



3D



H F A D L R
VR
Overlay Off

4 cm



Coronal

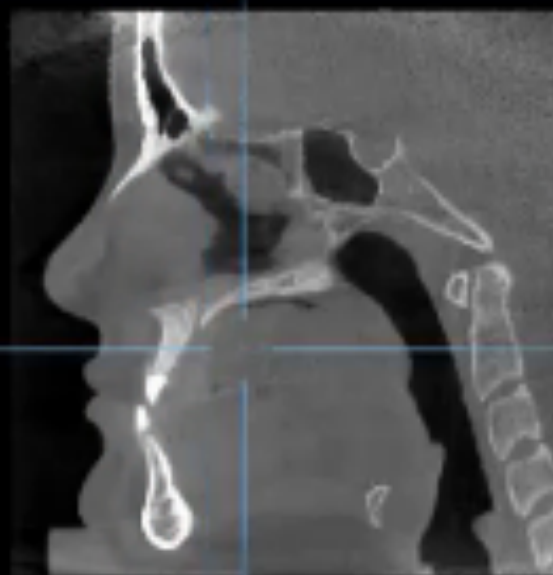


295
MPR
Th: 0 [mm]
Filter Off

4 cm



Sagittal

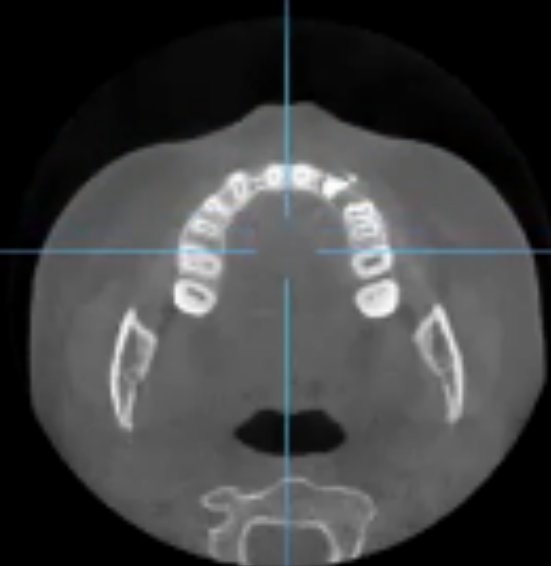


260
MPR
Th: 0 [mm]
Filter Off

4 cm



Axial

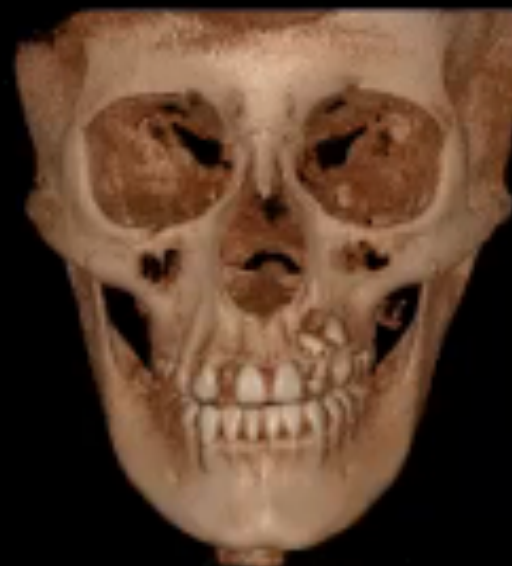


306
MPR
Th: 0 [mm]
Filter Off

4 cm



3D



H P A B L R
V/R
Overlay Off

4 cm



Coronal

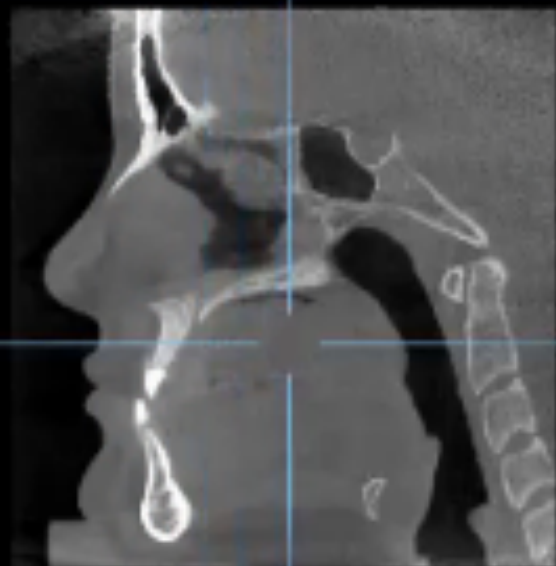


252
MPK
Th: 0 [mm]
Filter Off

4 cm



Sagittal

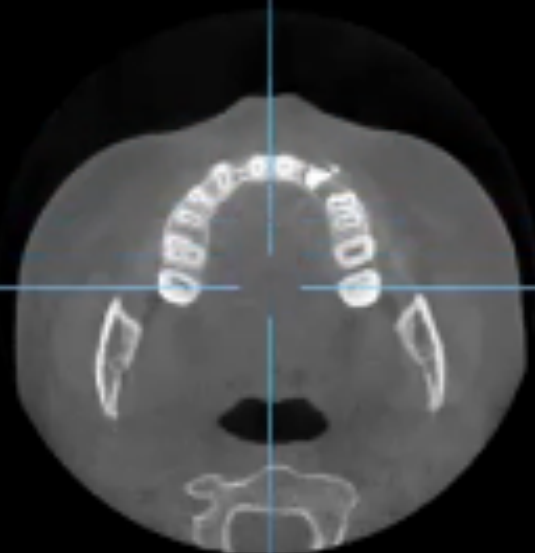


260
MPK
Th: 0 [mm]
Filter Off

4 cm



Axial



306
MPK
Th: 0 [mm]
Filter Off

4 cm



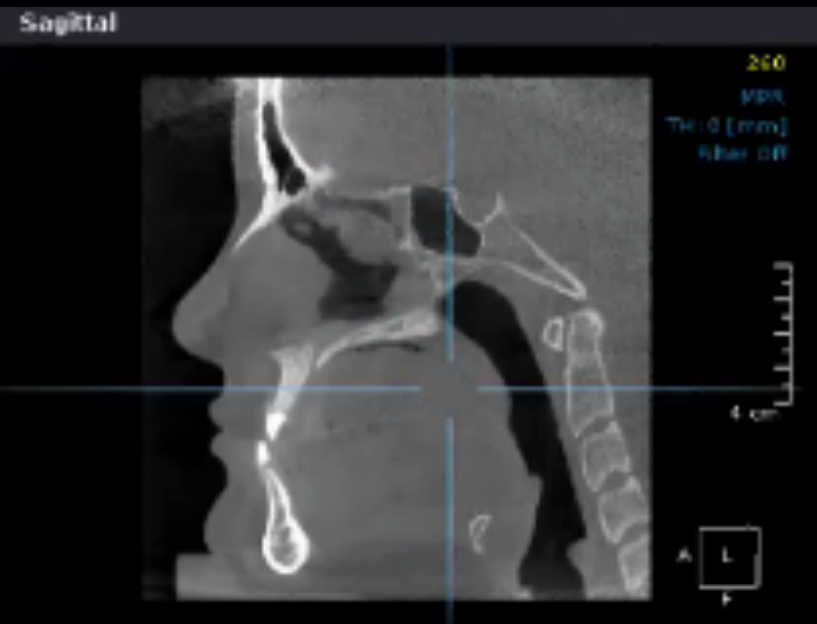
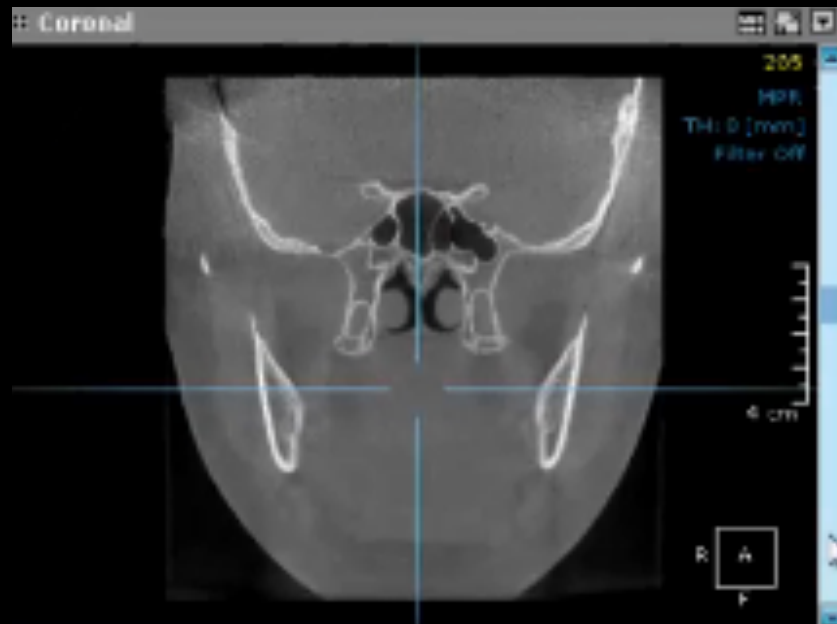
3D



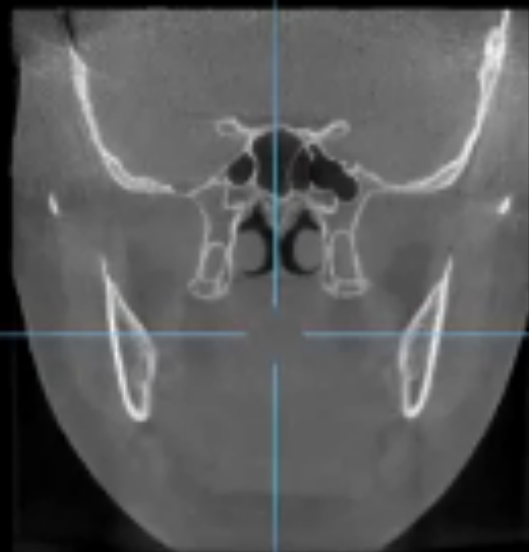
H P A B L R
VR
Overlay Off

4 cm





Coronal



205
MPR
Thk: 0 [mm]
Filter: Off

4 cm



Sagittal

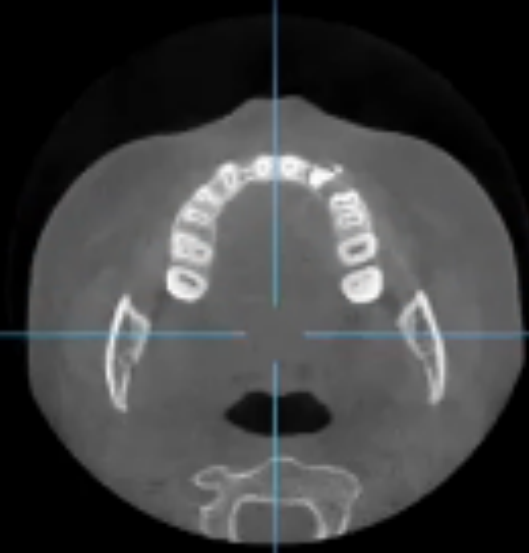


260
MPR
Thk: 0 [mm]
Filter: Off

4 cm



Axial



306
MPR
Thk: 0 [mm]
Filter: Off

4 cm



3D

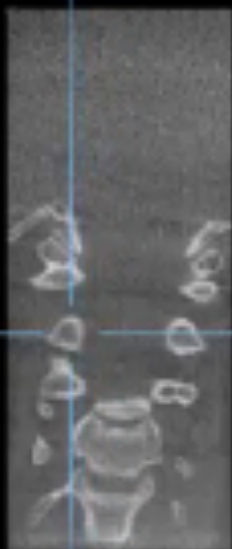


H: P: A: R: L: B:
Viz:
Overlay: Off

4 cm



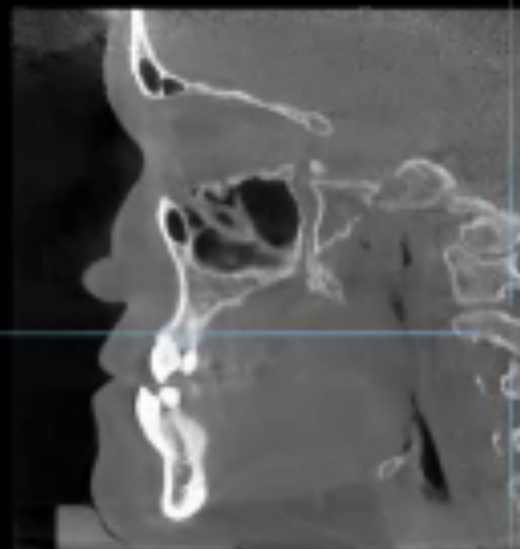
Coronal



33
MPR
Thk: 0 [mm]
Filter: Off



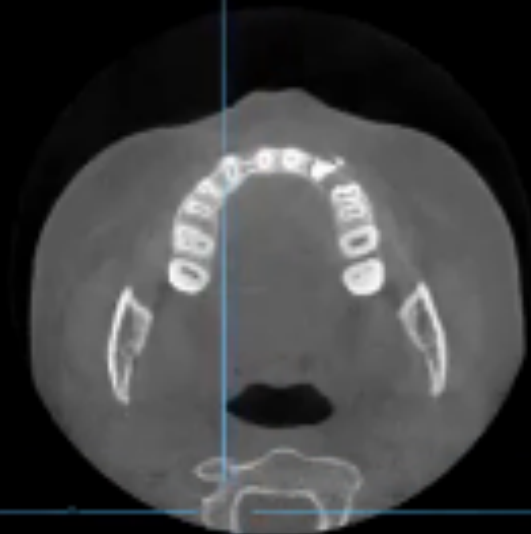
Sagittal



210
MPR
Thk: 0 [mm]
Filter: Off



Axial



306
MPR
Thk: 0 [mm]
Filter: Off

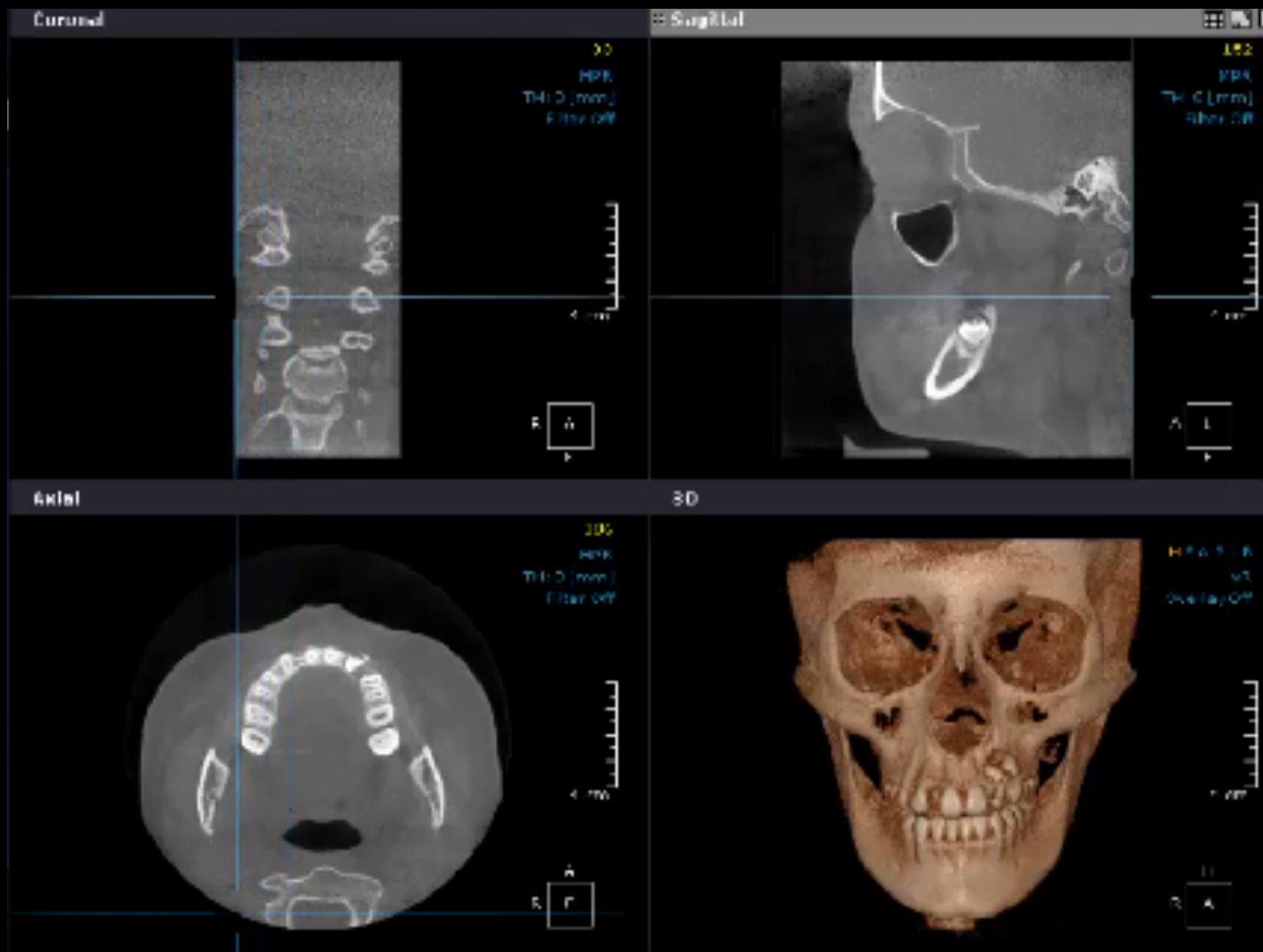


3D

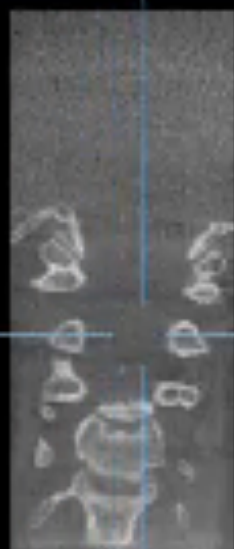


H F A P L R
VR
Overlay: Off





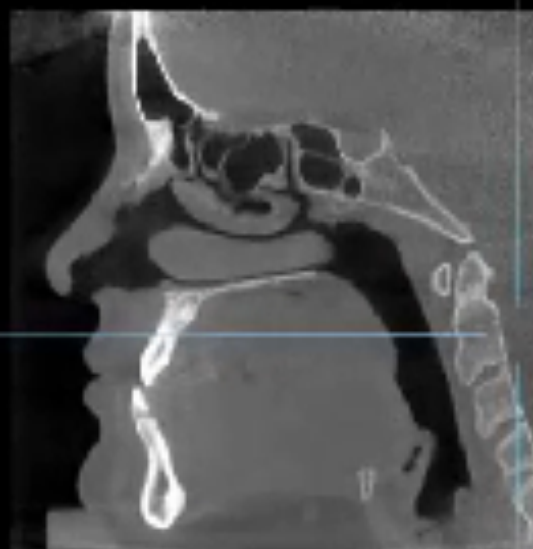
Coronal



30
MPR
Th: 0 [mm]
Filter: Off



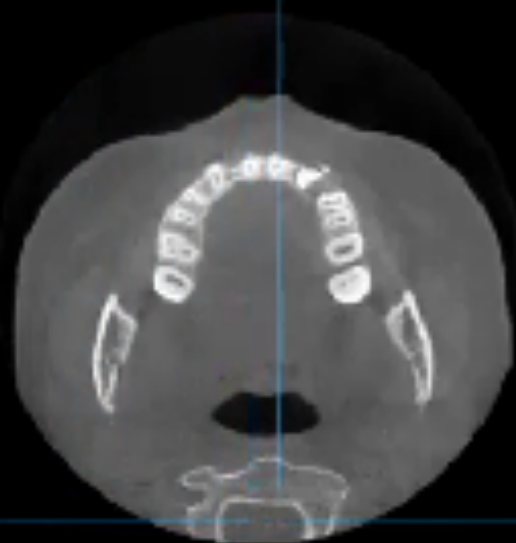
Sagittal



270
MPR
Th: 0 [mm]
Filter: Off



Axial



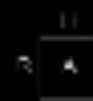
200
MPR
Th: 0 [mm]
Filter: Off



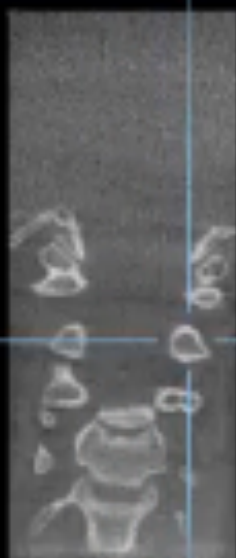
3D



MPR
Th: 0 [mm]
Filter: Off



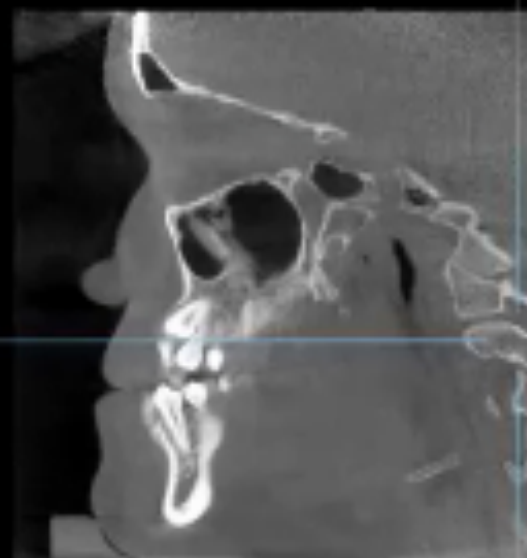
Coronal



33
MPR
Thk: 0 [mm]
Filter: Off



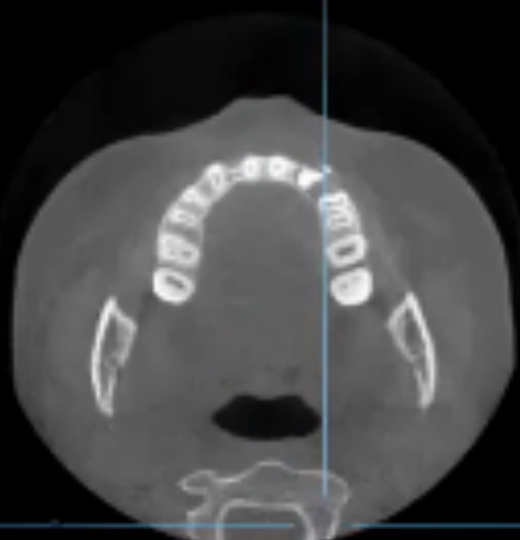
Sagittal



316
MPR
Thk: 0 [mm]
Filter: Off



Axial



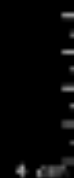
306
MPR
Thk: 0 [mm]
Filter: Off

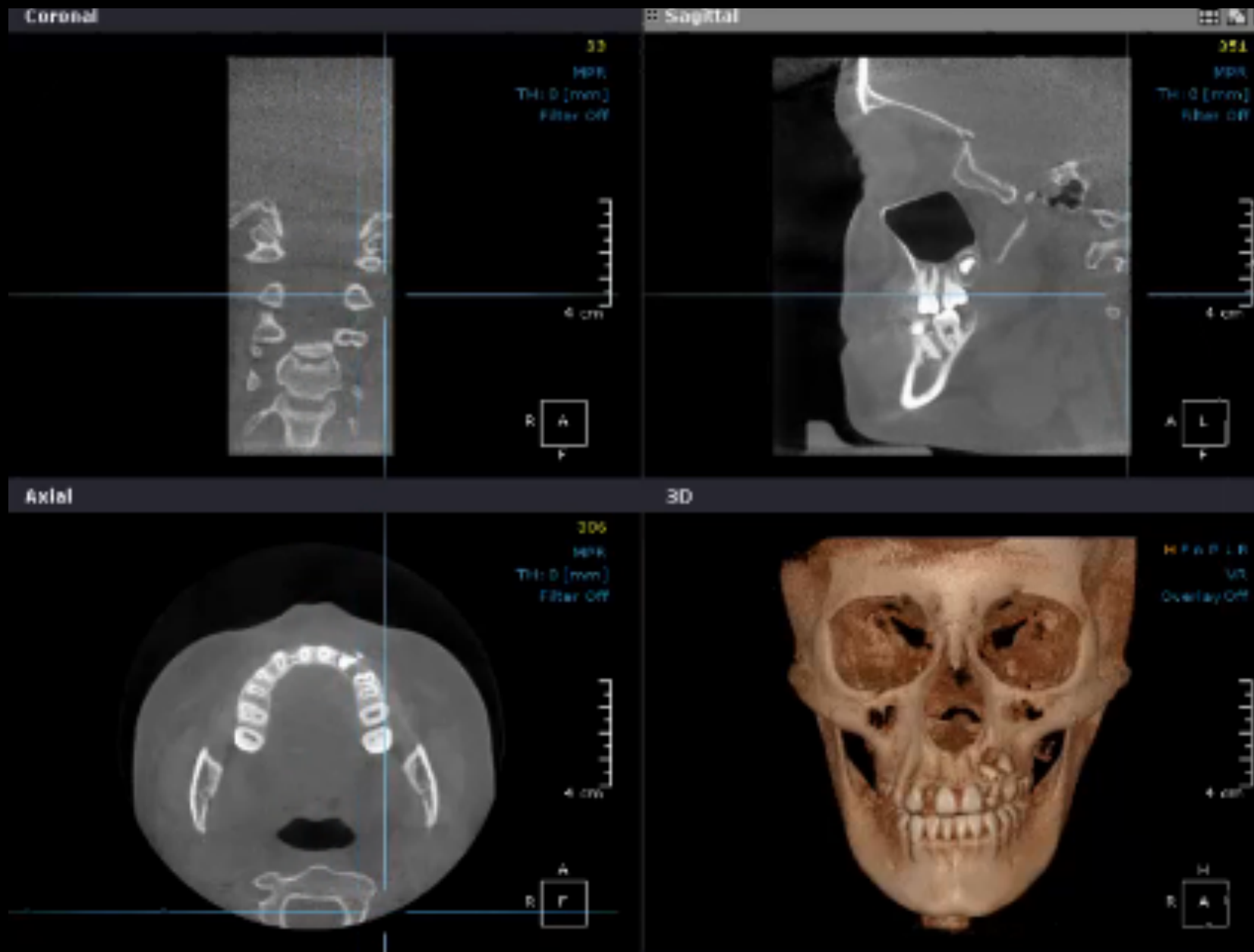


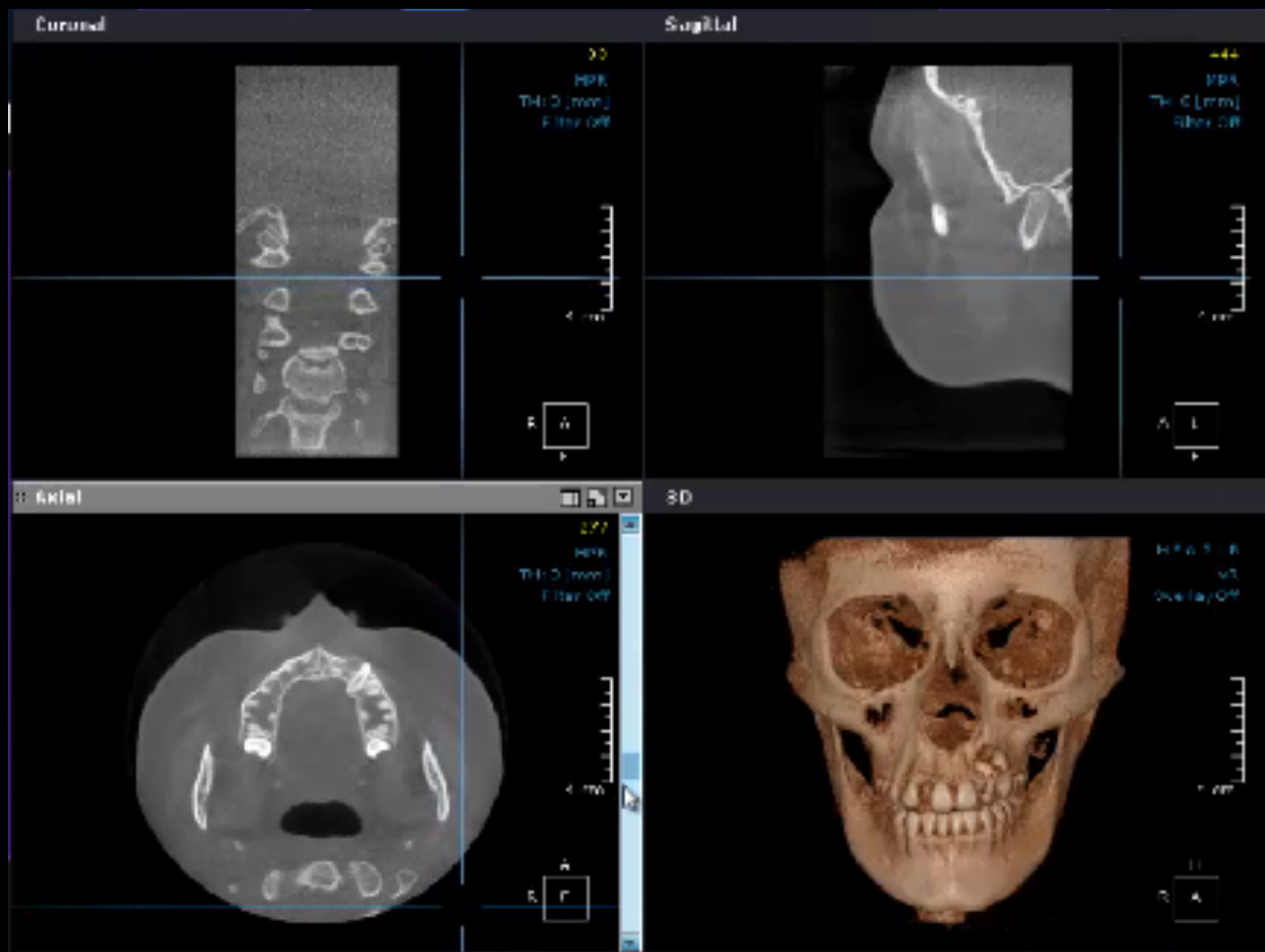
3D



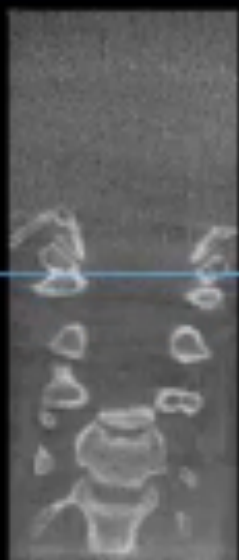
H P A B L R
VR
Overlay Off







Coronal



33

MPR
Th: 0 [mm]
Filter Off

Sagittal



444

MPR
Th: 0 [mm]
Filter Off

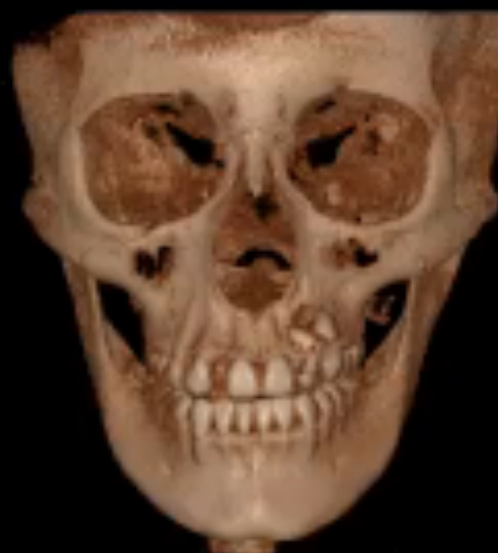
:: Axial



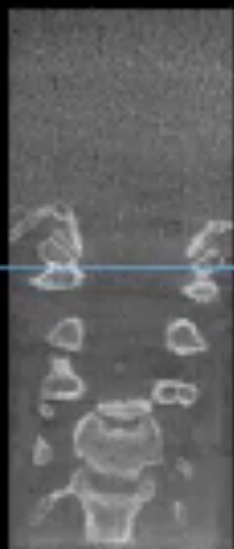
244

MPR
Th: 0 [mm]
Filter Off

3D

MPR
Th: 0 [mm]
Filter Off

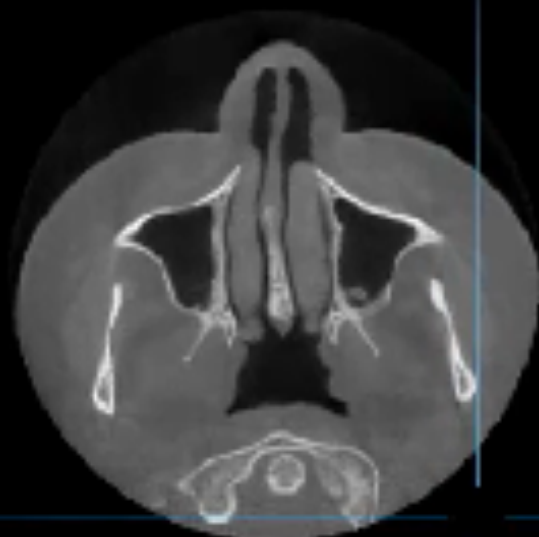
Coronal

00
HPR
TH: 0 (mm)
Filter: Off

Sagittal

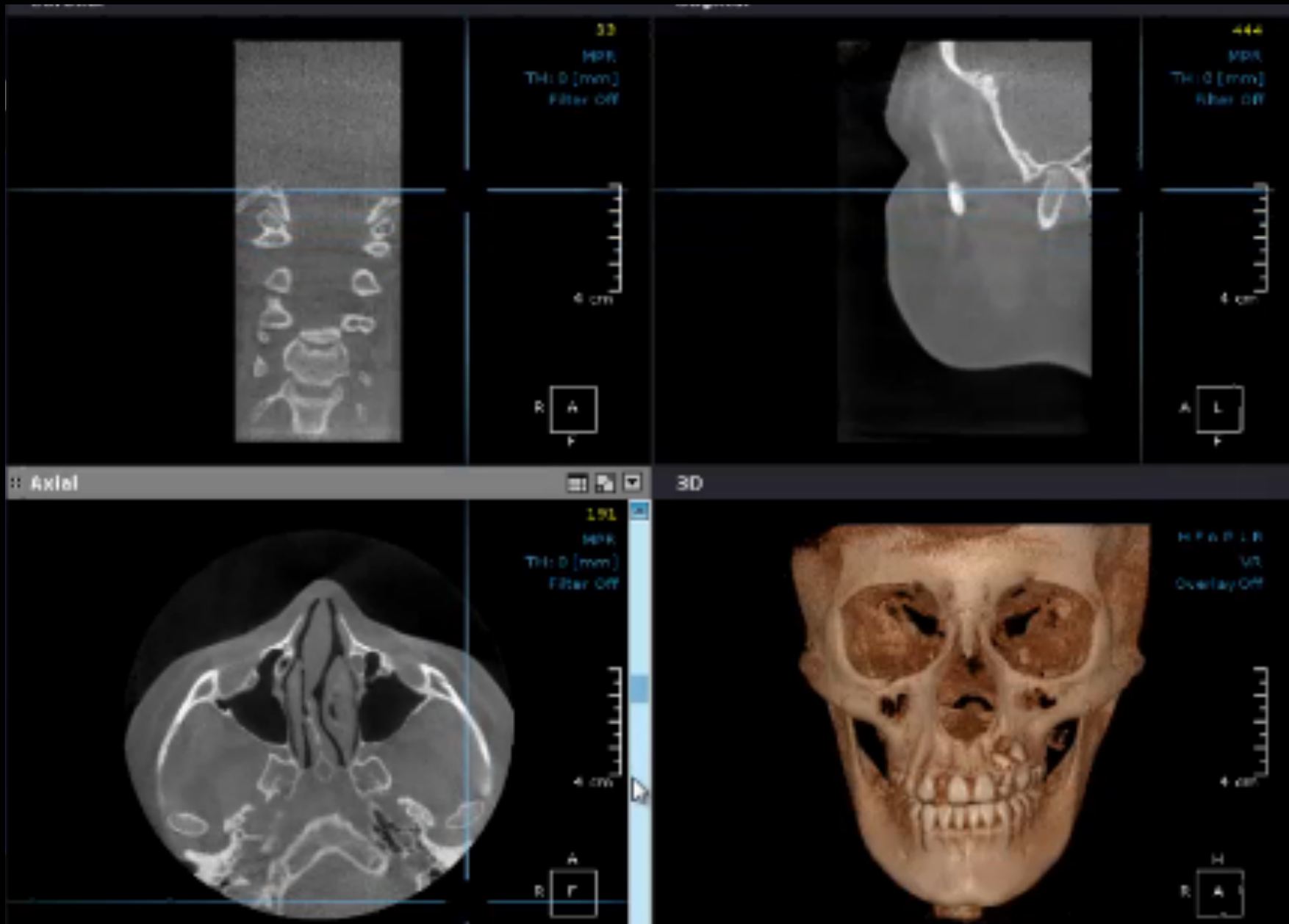
44
HPR
TH: 0 (mm)
Filter: Off

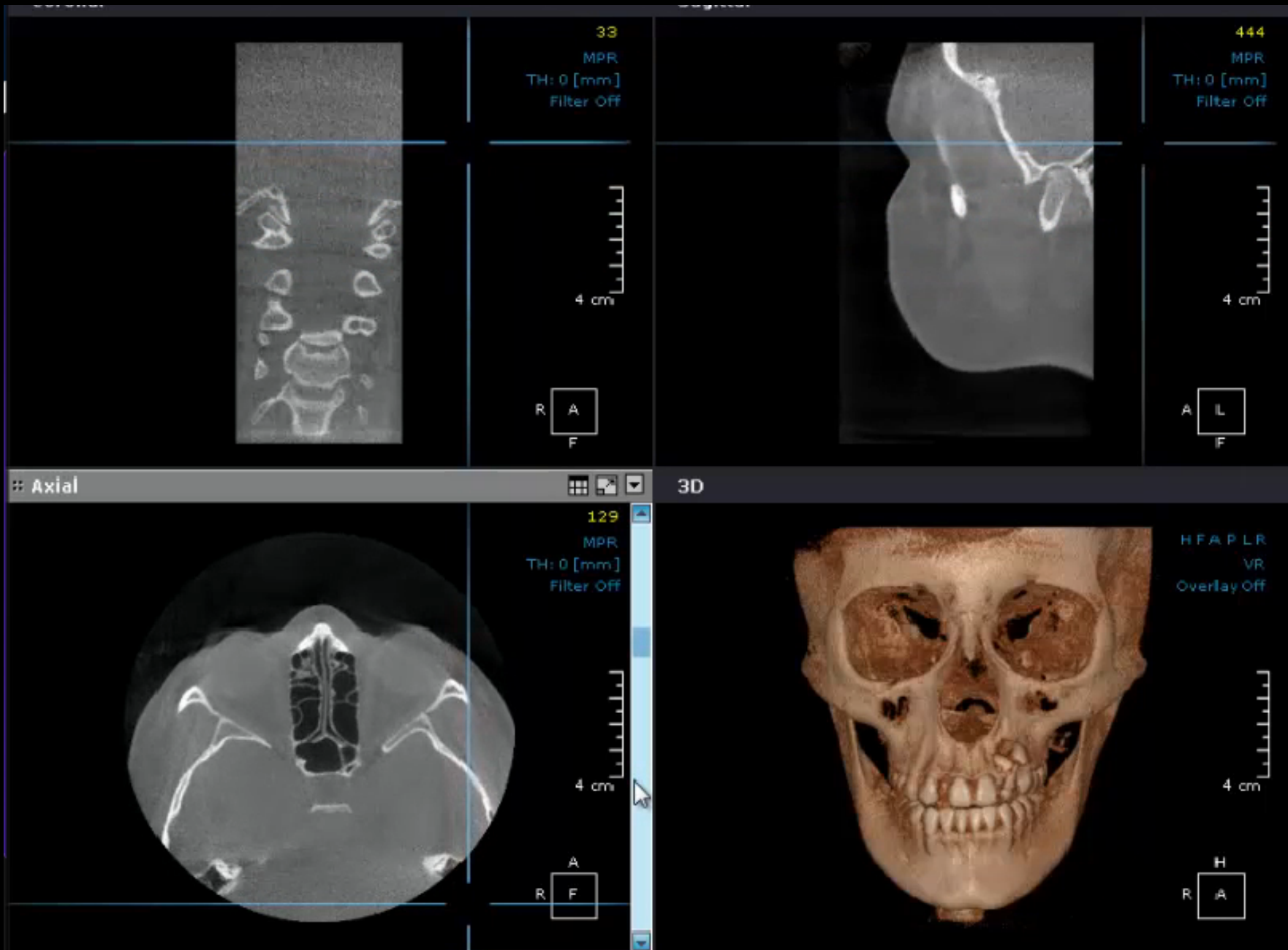
Axial

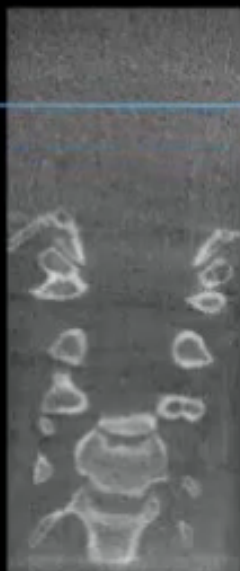
244
HPR
TH: 0 (mm)
Filter: Off

3D

HPR 5.0
TH: 0
Overlay: Off







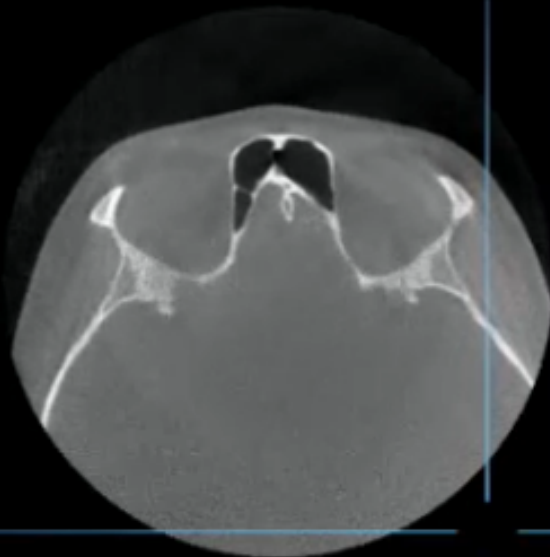
33
MPR
TH: 0 [mm]
Filter Off



444
MPR
TH: 0 [mm]
Filter Off



⌘ Axial



90
MPR
TH: 0 [mm]
Filter Off



3D



H F A P L R
VR
Overlay Off



Coronal



33
MPR
TH: 0 [mm]
Filter Off



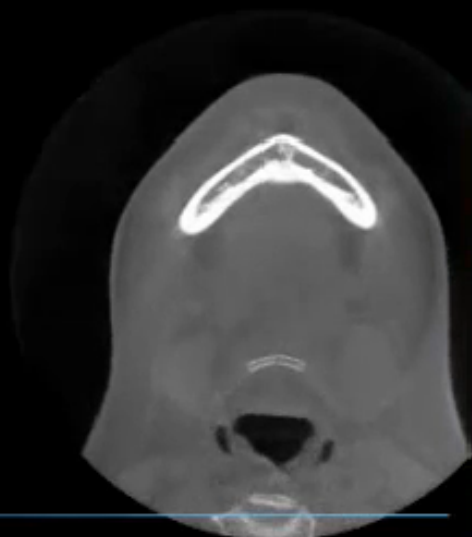
Sagittal



444
MPR
TH: 0 [mm]
Filter Off



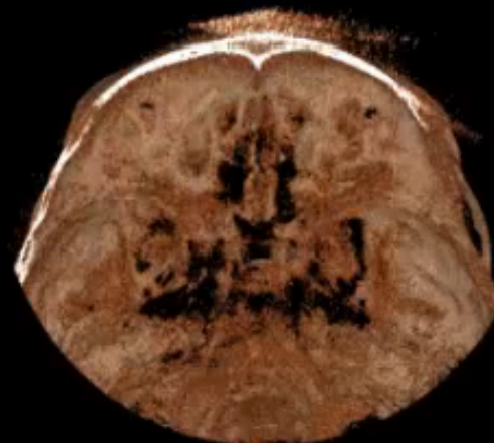
Axial



452
MPR
TH: 0 [mm]
Filter Off



3D



H E A P L R
VR
Overlay Off



Coronal



33

MPR
TH: 0 [mm]
Filter Off



Sagittal

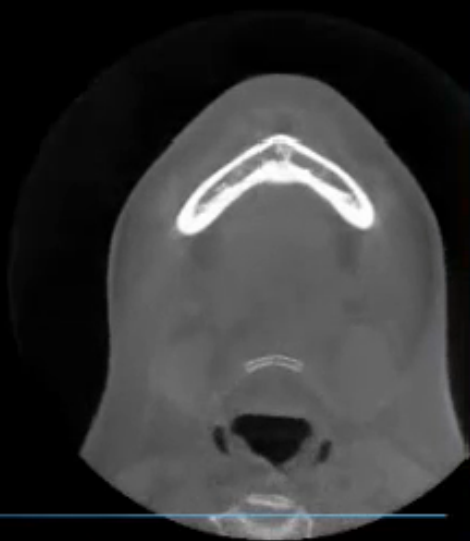


444

MPR
TH: 0 [mm]
Filter Off



Axial



452

MPR
TH: 0 [mm]
Filter Off



3D



H B P L R
VR
Overlay Off



Coronal



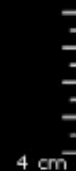
33
MPR
TH: 0 [mm]
Filter Off



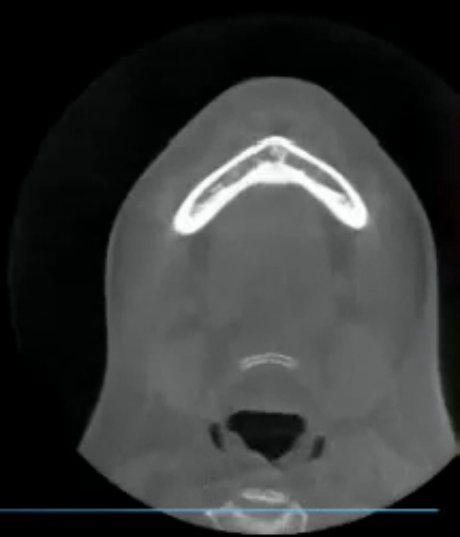
Sagittal



444
MPR
TH: 0 [mm]
Filter Off



Axial



452
MPR
TH: 0 [mm]
Filter Off



3D



H F A P L R
Overlay Off



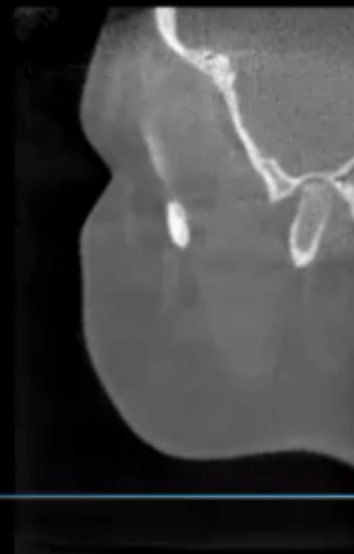
Coronal



33
MPR
TH: 0 [mm]
Filter Off



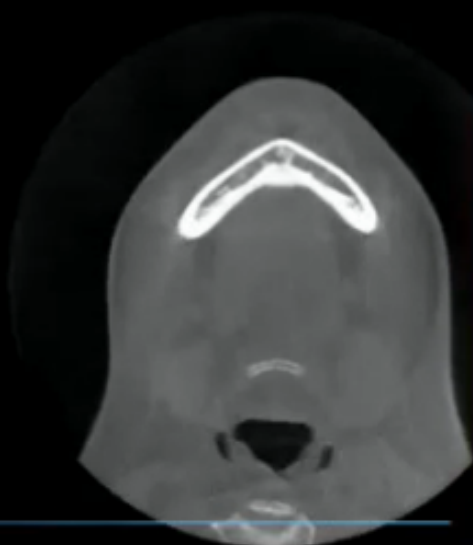
Sagittal



444
MPR
TH: 0 [mm]
Filter Off



Axial



452
MPR
TH: 0 [mm]
Filter Off



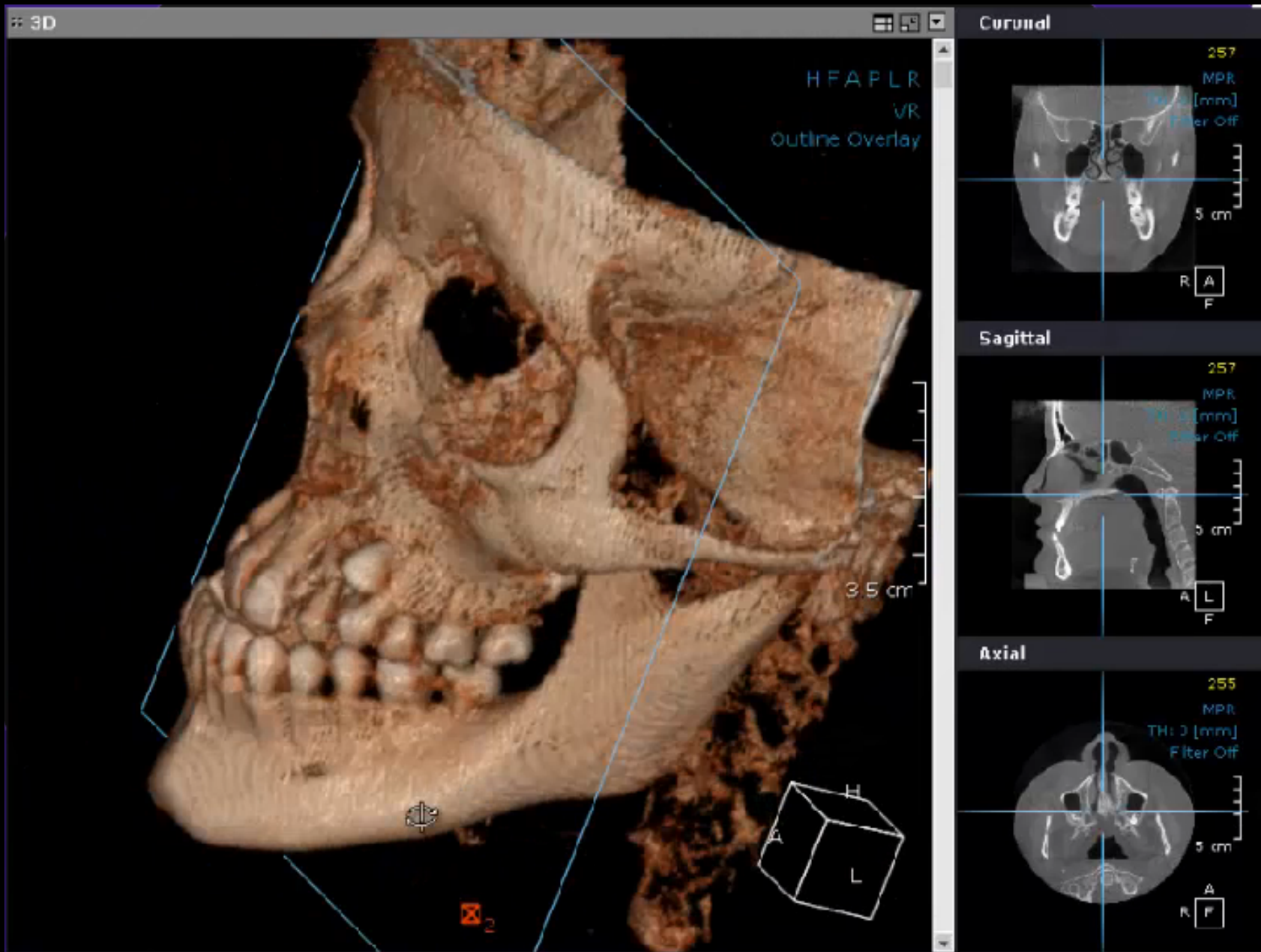
3D

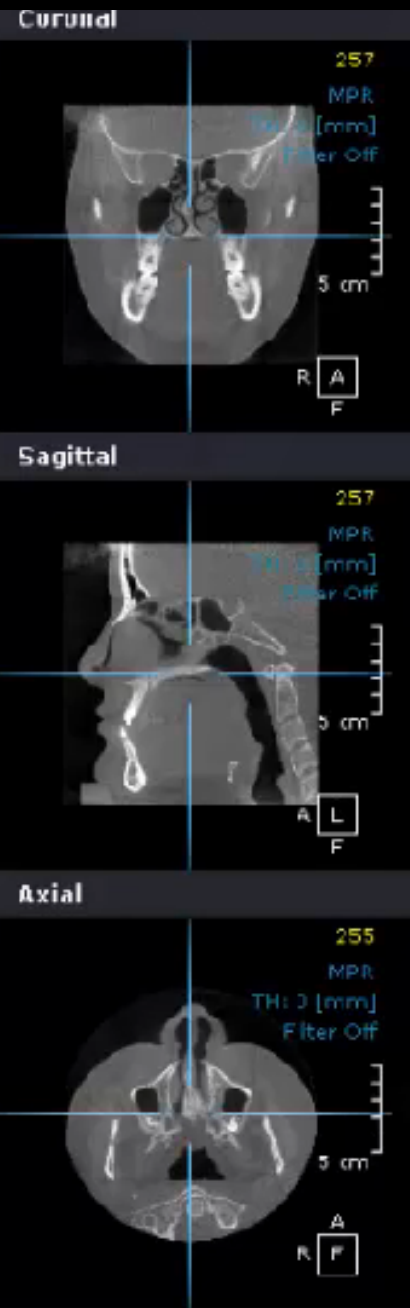
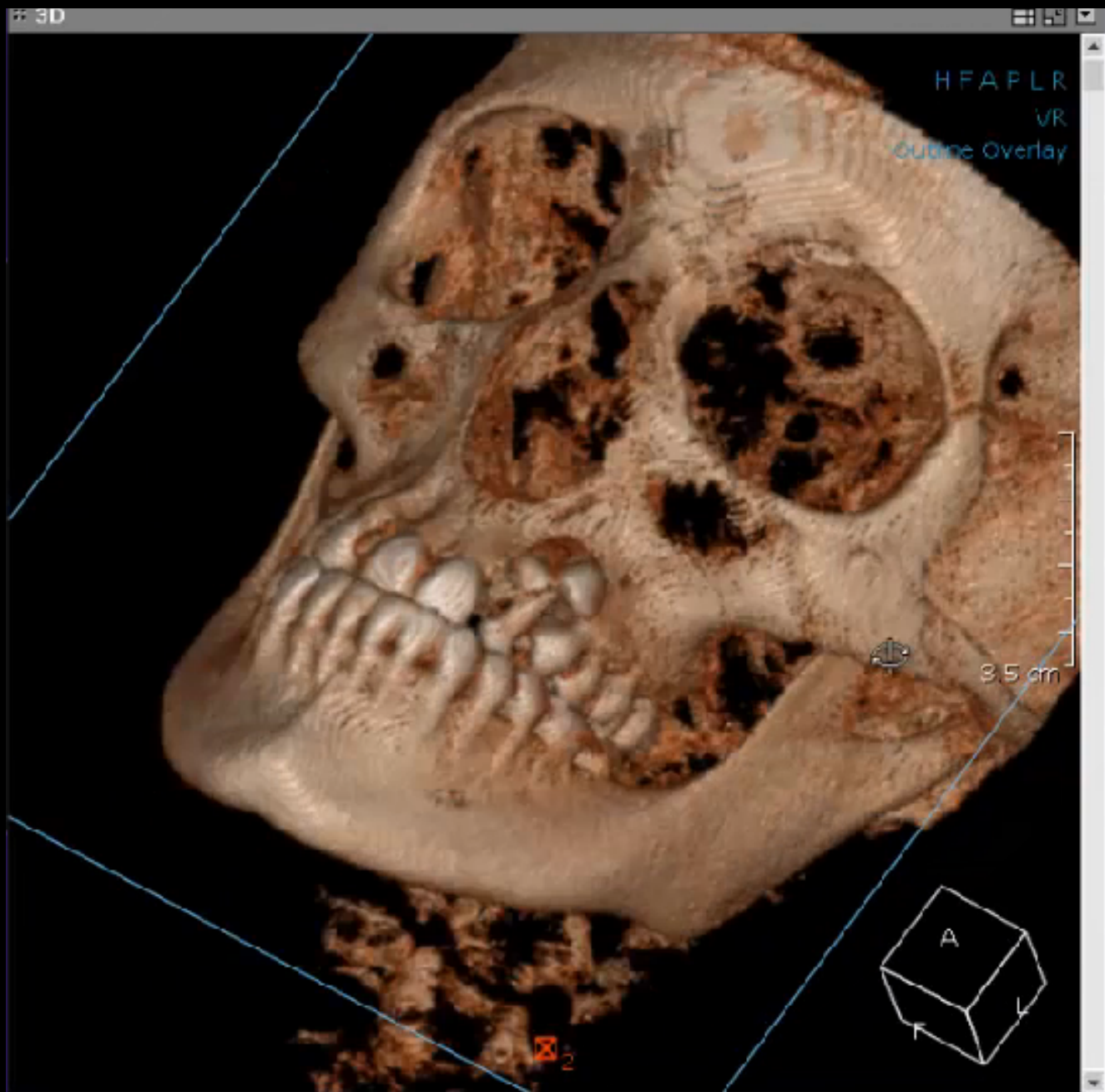


H F A P L R
VR
Overlap Off



MJR





3D



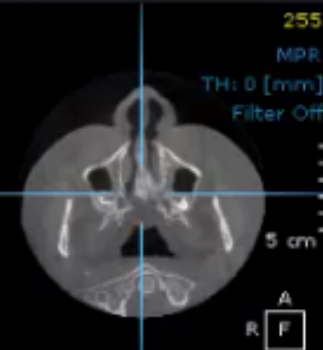
Coronal



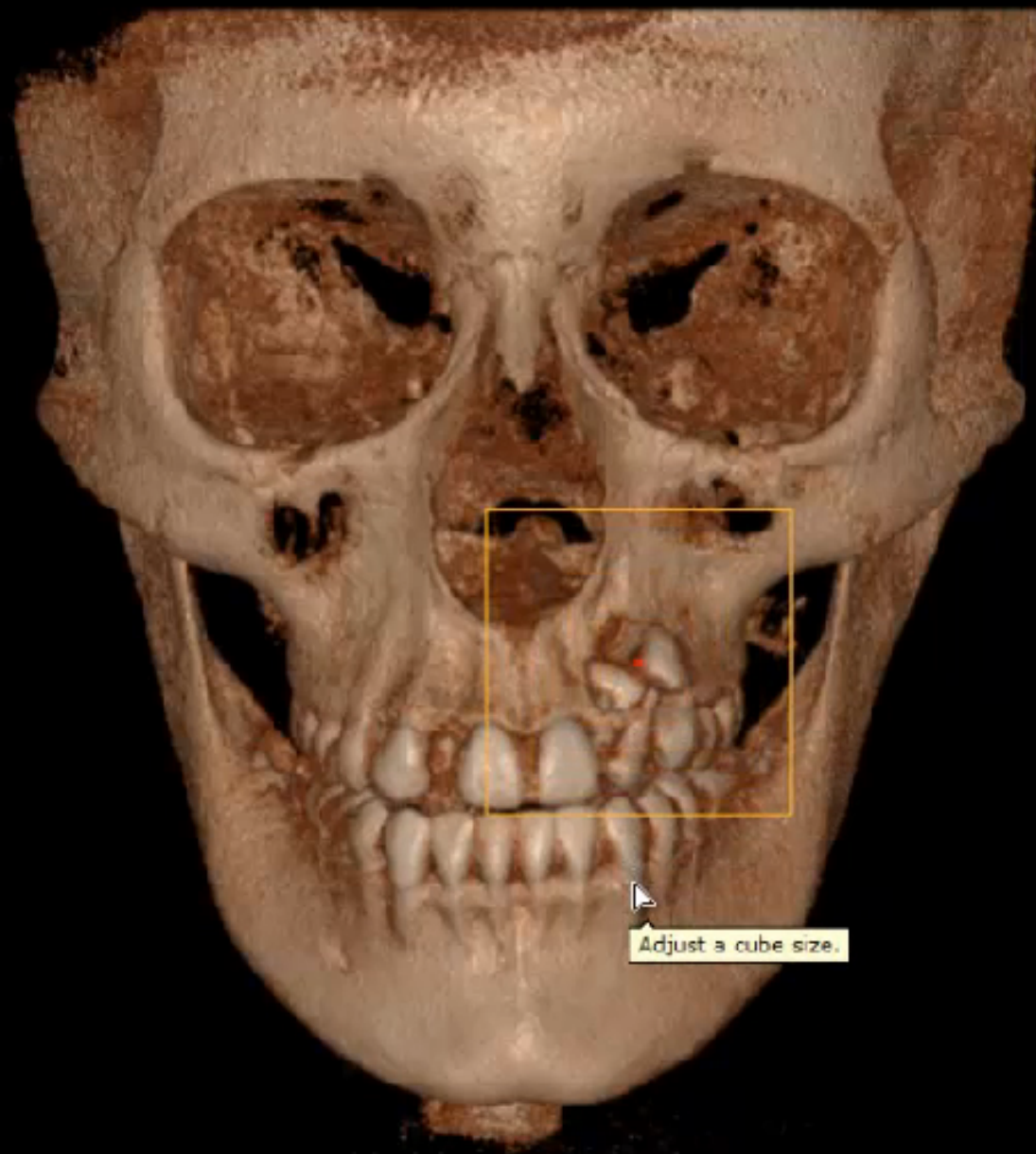
Sagittal



Axial



3D



Coronal

257



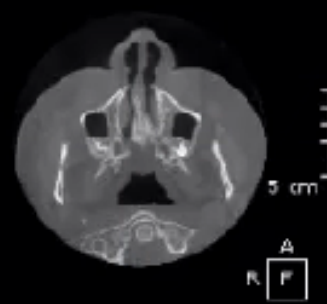
Sagittal

257

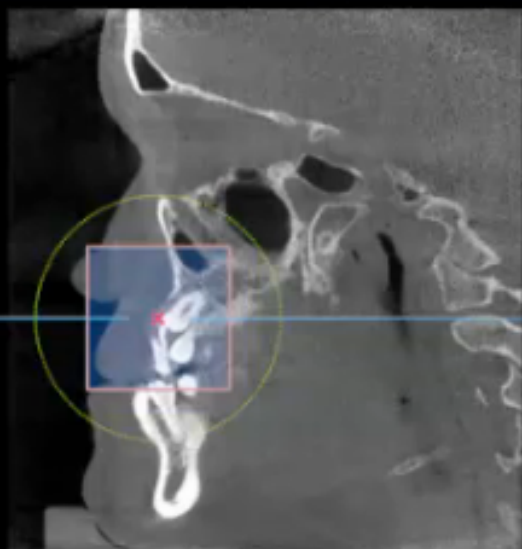


Axial

255



Sagittal



314

MPR
TH: 0 [mm]
Filter Off

4 cm



3D-Zoom

Cube Size: 39.8 [mm]

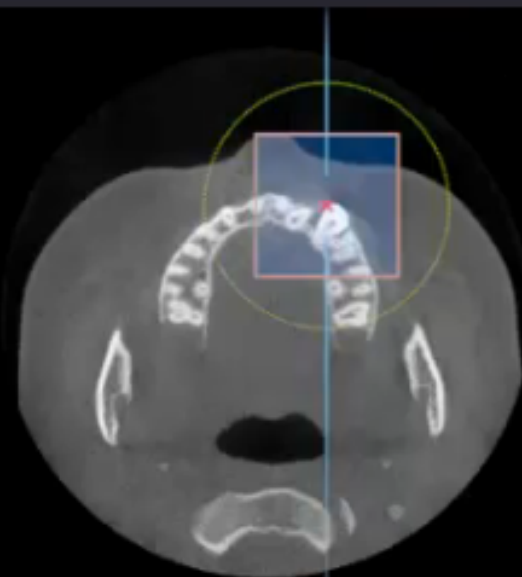


HFAPLR
VR

1.8 cm



Axial



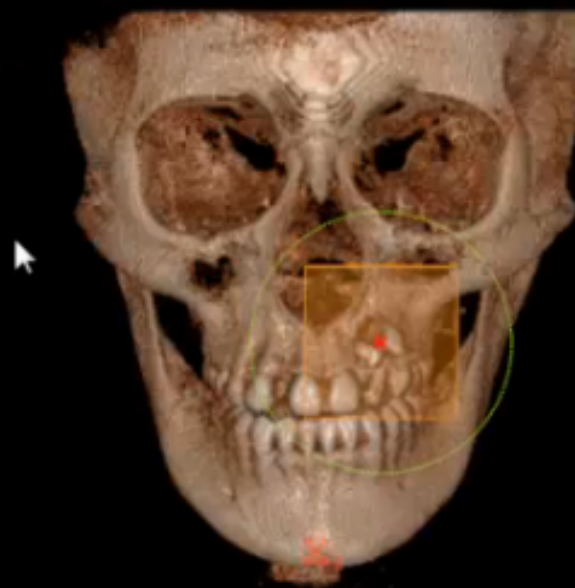
289

MPR
TH: 0 [mm]
Filter Off

4 cm



3D



HFAPLR
VR
Overlay Off

3.5 cm



3D-Zoom

Cube Size: 39.8 [mm]

H F A P L R
VR



2 cm



Sagittal

314

MPR

TH: 0 [mm]

Filter Off



A L
F

5 cm

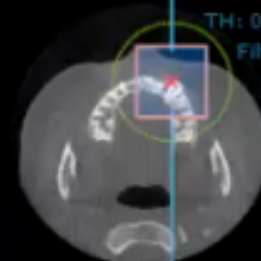
Axial

289

MPR

TH: 0 [mm]

Filter Off



A R
F

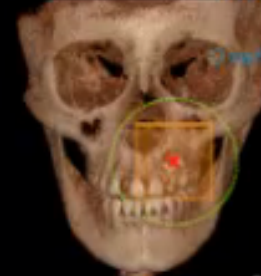
5 cm

3D

H F A P L R

VR

Overlay Off



H R
A

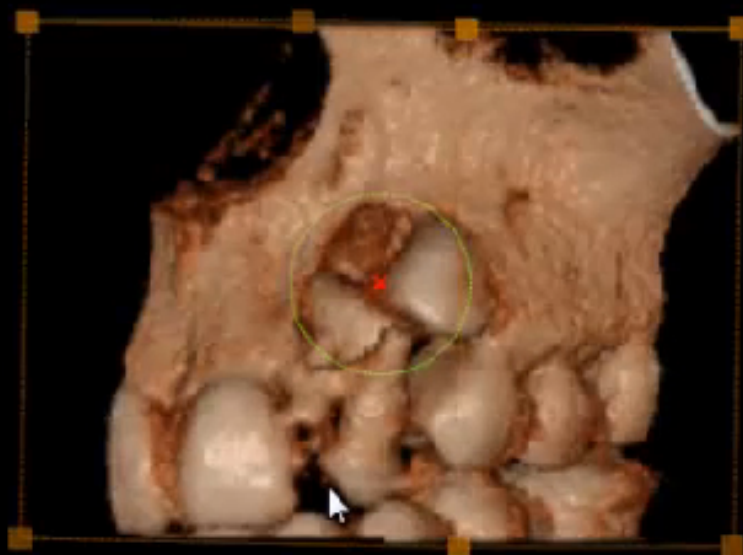
5 cm

3D-Zoom

Cube Size: 39.8 [mm]

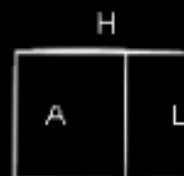
HFAPLR

VR



2 cm

1



Sagittal

314

MPR

TH: 3 [mm]

Filter Off



A L F

5 cm

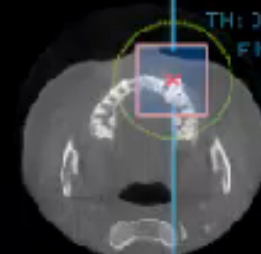
Axial

289

MPR

TH: 3 [mm]

Filter Off



A R F

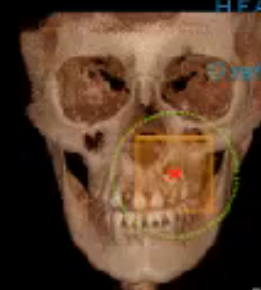
5 cm

3D

HFAPLR

VR

Overlay Off



A H R

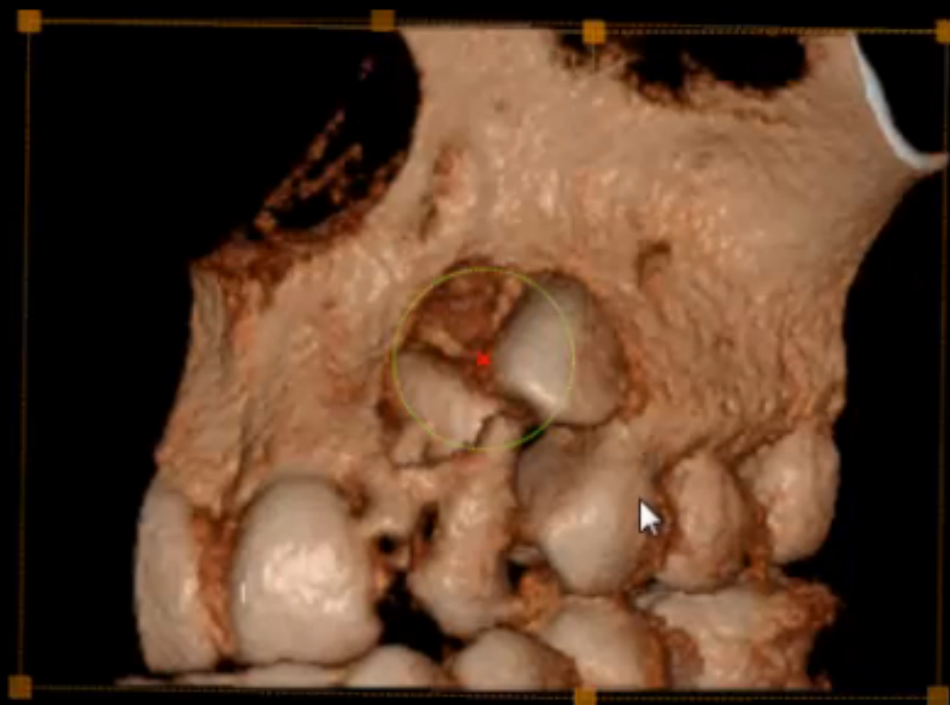
5 cm

MJR

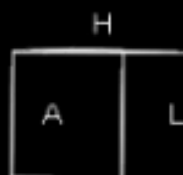
3D-Zoom

Cube Size: 40.9 [mm]

H F A P L R
VR



1.9 cm



Sagittal

314

MPR

TH: 0 [mm]

Filter: Off



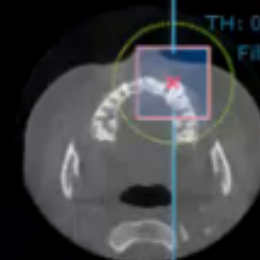
Axial

289

MPR

TH: 0 [mm]

Filter: Off

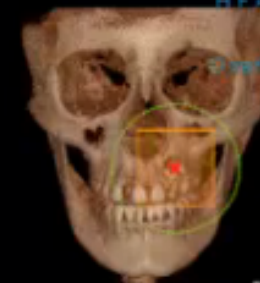


3D

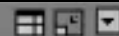
H F A P L R

VR

Overlay: Off

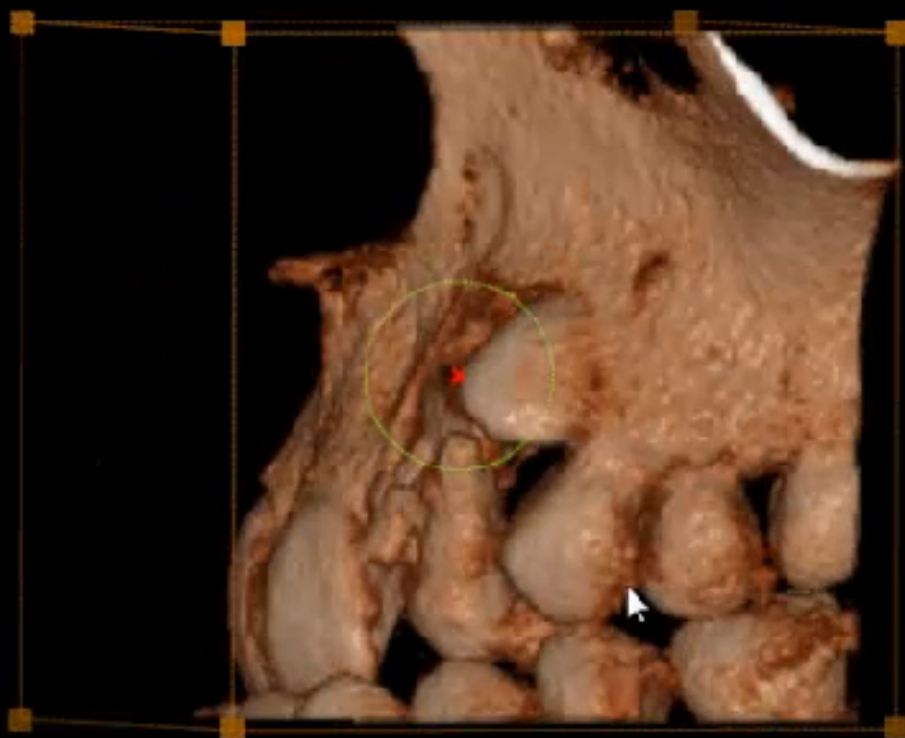


3D-Zoom

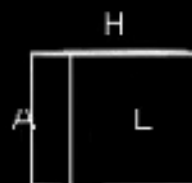


Cube Size: 40.9 [mm]

HEAPLR
VR



1.9 cm



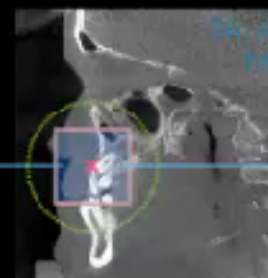
Sagittal

314

MPR

TH: 2 [mm]

Filter Off



5 cm

A L
F

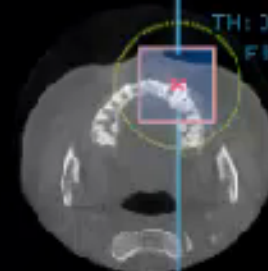
Axial

289

MPR

TH: 2 [mm]

Filter Off



5 cm

A L
R F

3D

HEAPLR

VR

Overlay Off



5 cm

H A
R

MJR

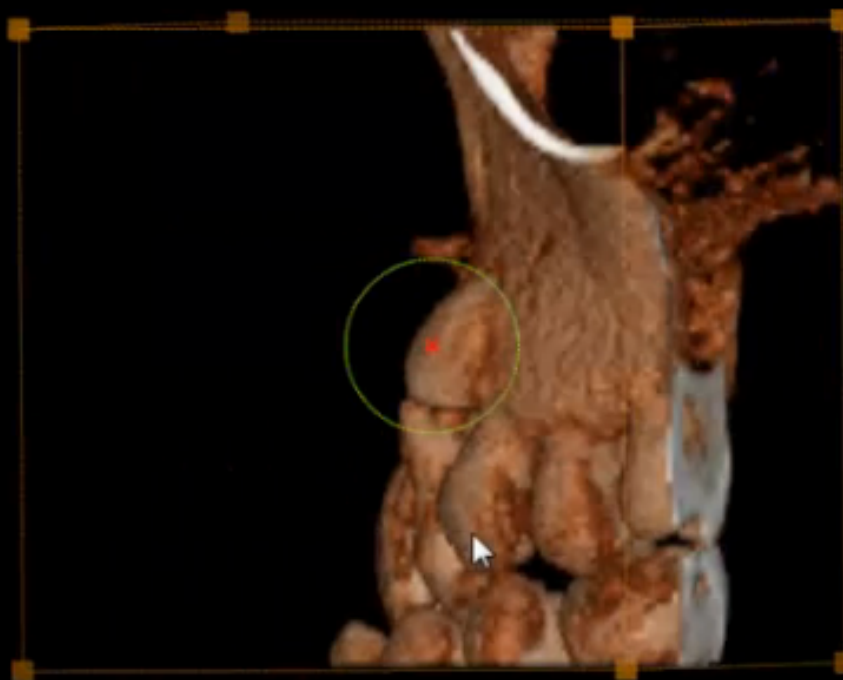
3D-Zoom



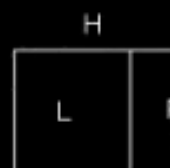
Cube Size: 40.9 [mm]

H F A P L R

VR



1.9 cm



Sagittal

314

MPR

TH: 0 [mm]

Filter Off



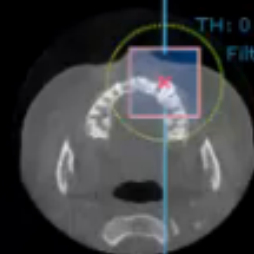
Axial

289

MPR

TH: 0 [mm]

Filter Off



3D

H F A P L R

VR

Display Off

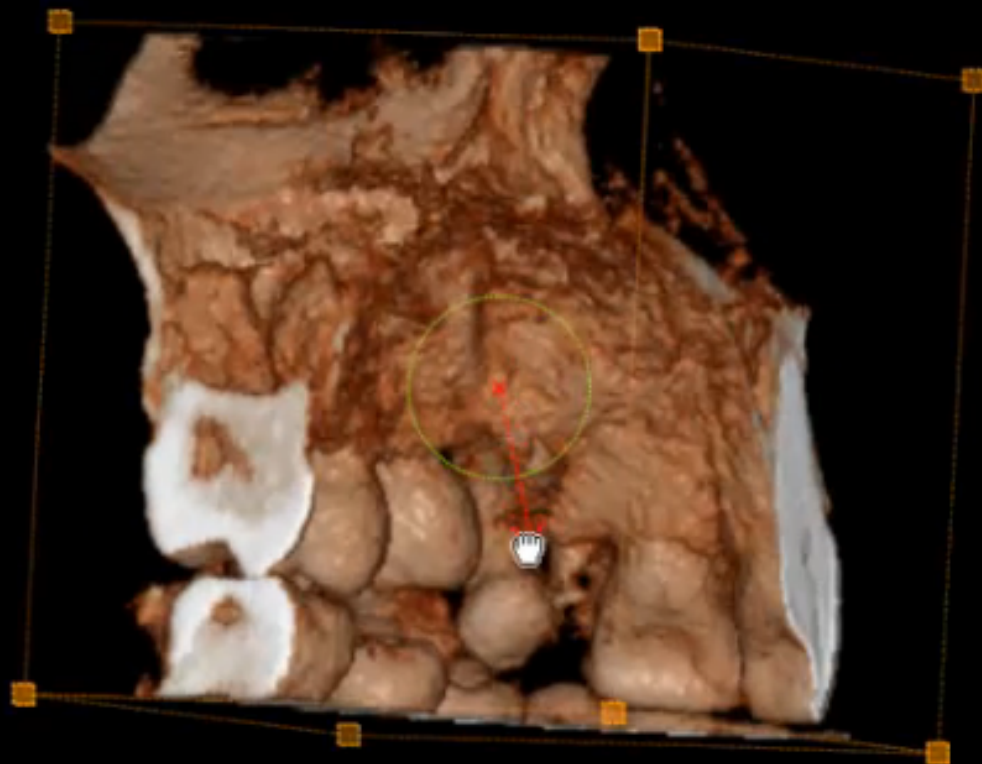


3D-Zoom

Cube Size: 40.9 [mm]

HFAPLR

VR



1.9 cm



Sagittal

314

MPR

TH: 2 [mm]

Filter Off



A L F

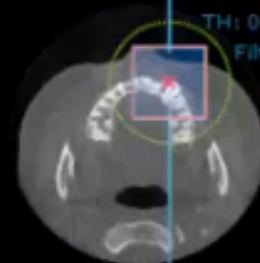
Axial

289

MPR

TH: 0 [mm]

Filter Off



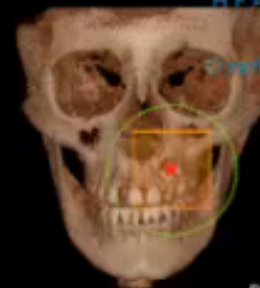
A R F

3D

HFAPLR

VR

Display Off

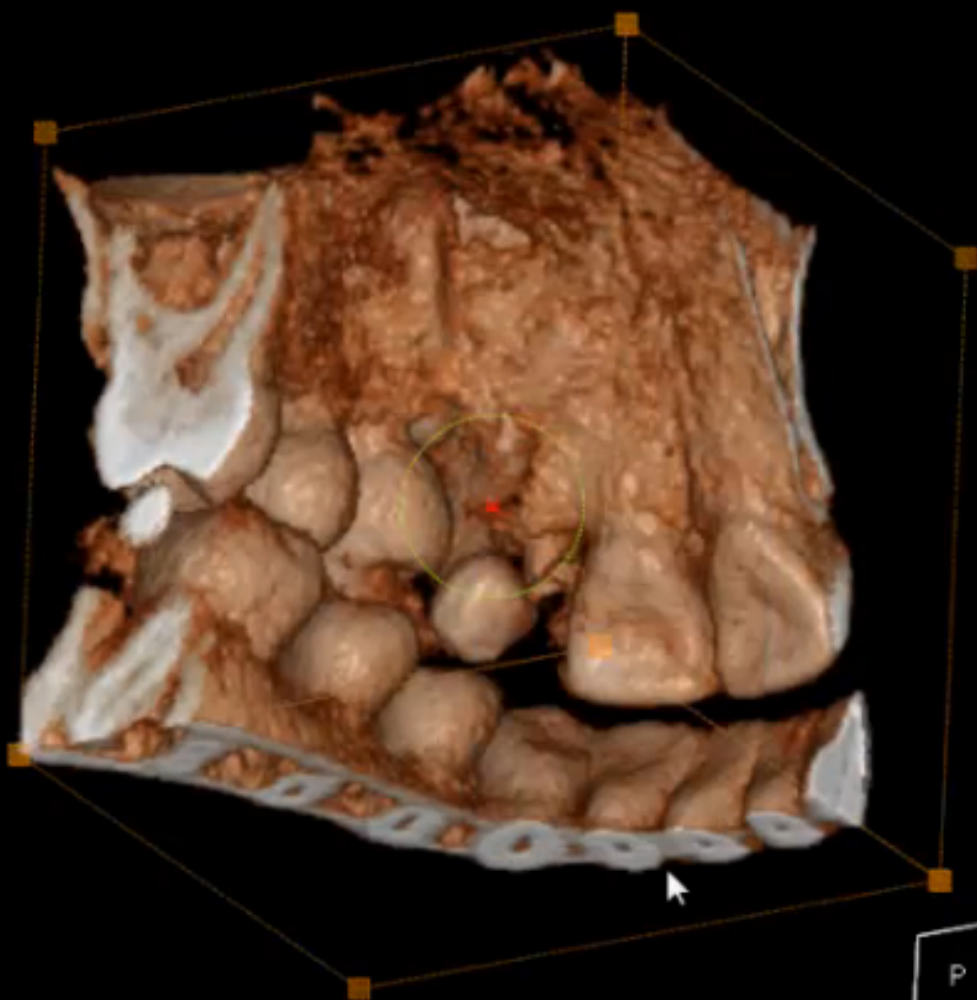


H R A

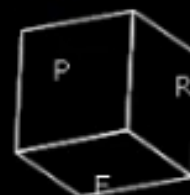
Cube Size: 40.9 [mm]

HFAPLR

VR



1.9 cm

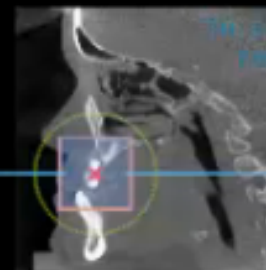


301

MPR

TH: 0 [mm]

Filter Off

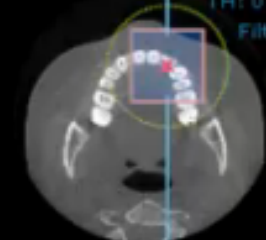
A
L
F

316

MPR

TH: 0 [mm]

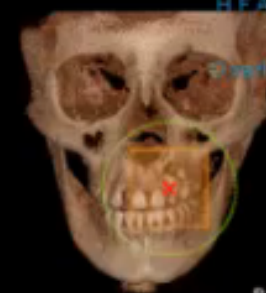
Filter Off

A
R
F

HFAPLR

VR

Overlay Off

H
R
A

3D-Zoom



Cube Size: 40.9 [mm]

H F A P L R

VR



1.9 cm



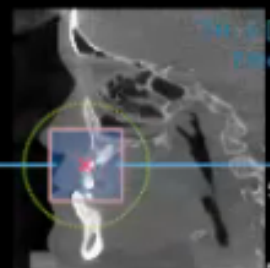
Sagittal

305

MPR

TH: 0 [mm]

Filter Off



A
F

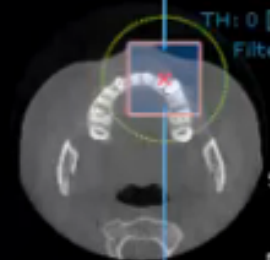
Axial

300

MPR

TH: 0 [mm]

Filter Off



A
R
F

3D

H F A P L R

VR

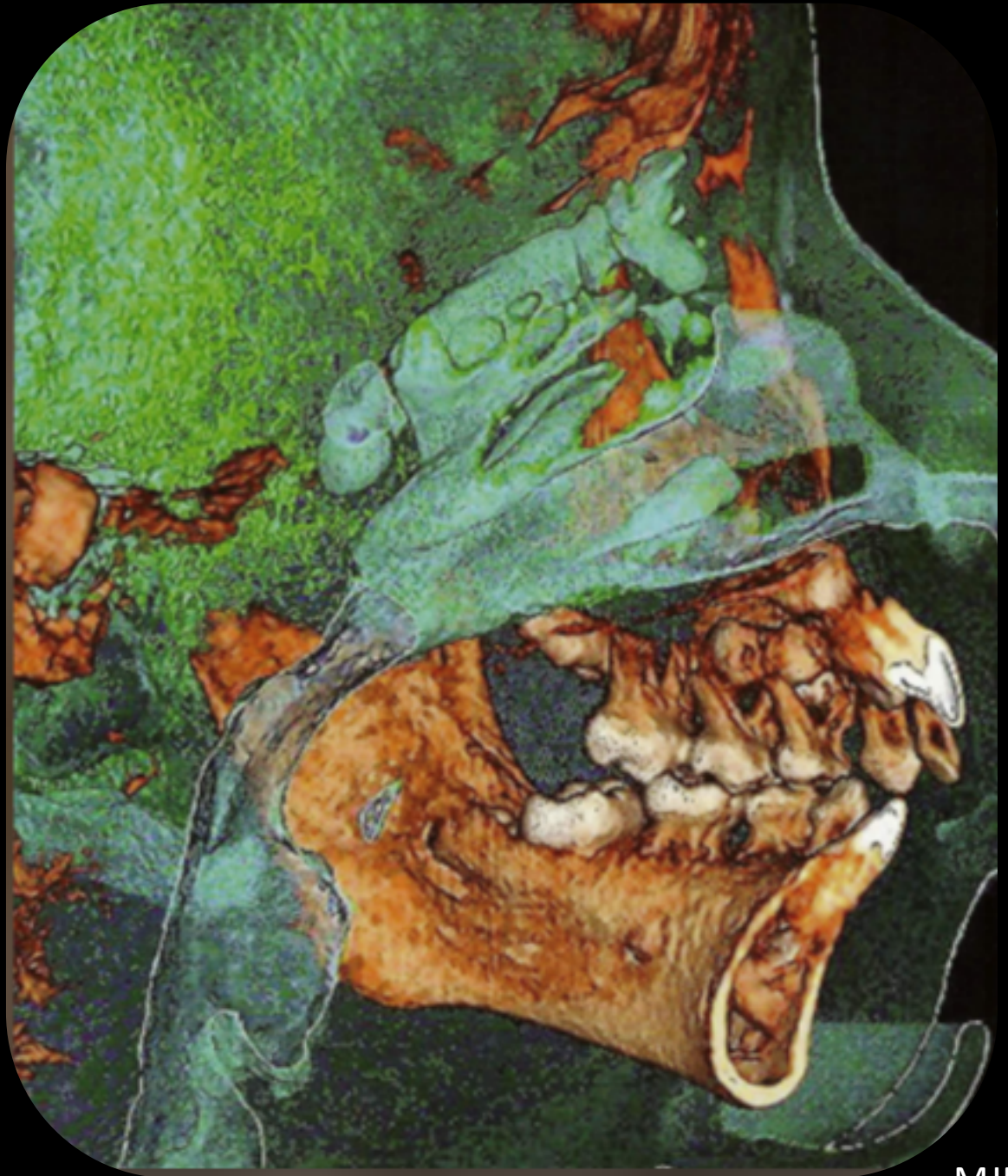
Overlay Off



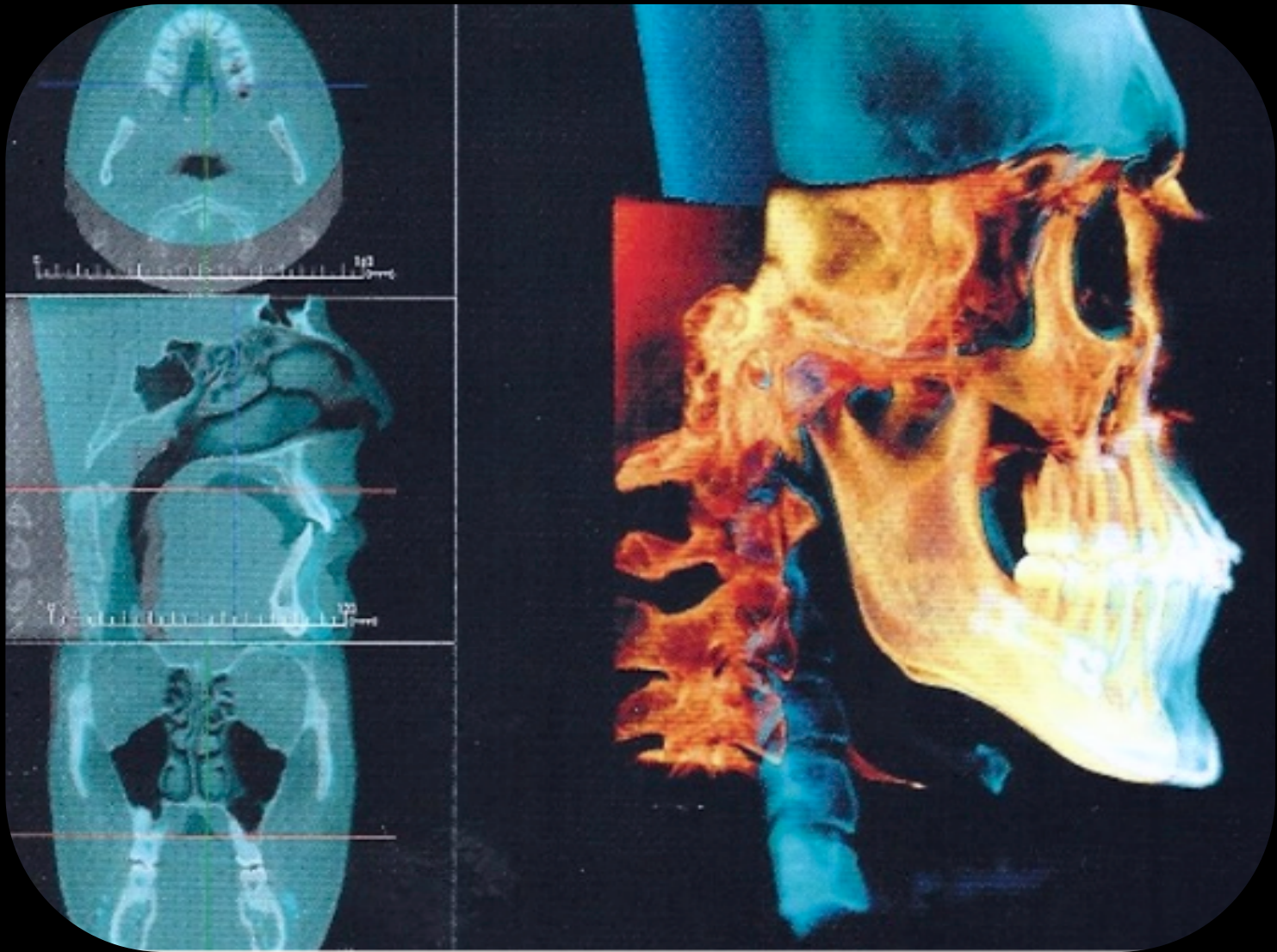
H
A
R

MJR

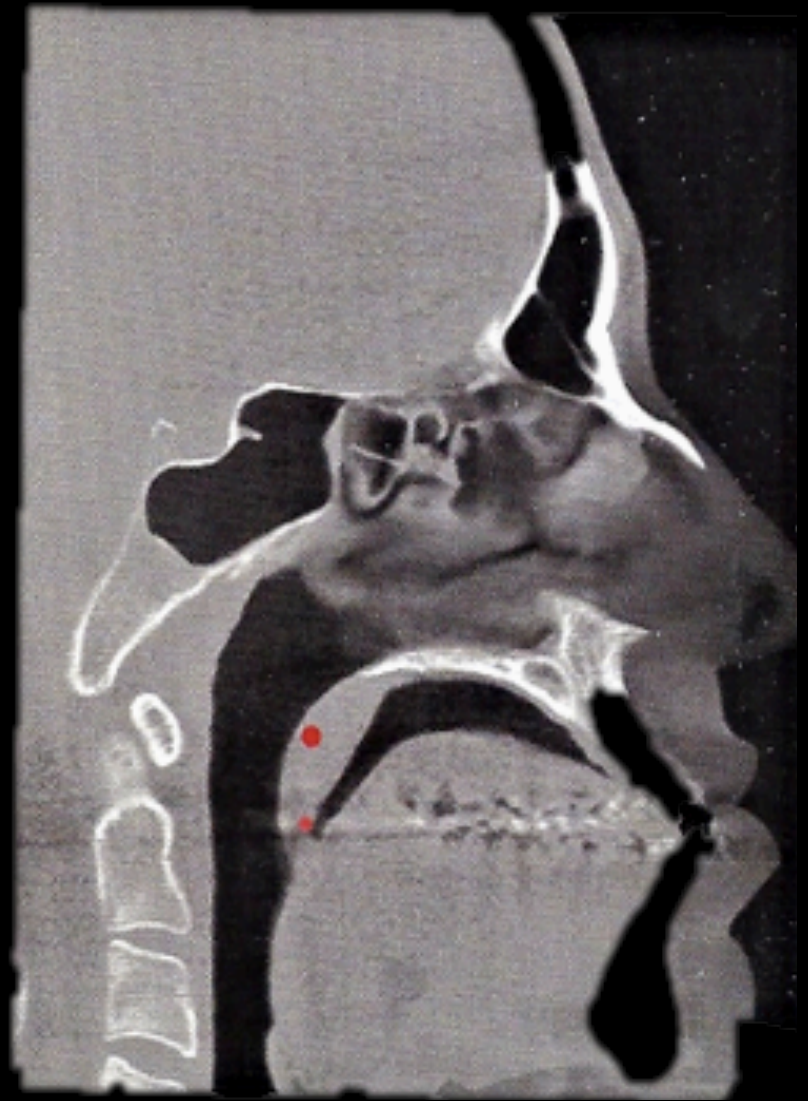
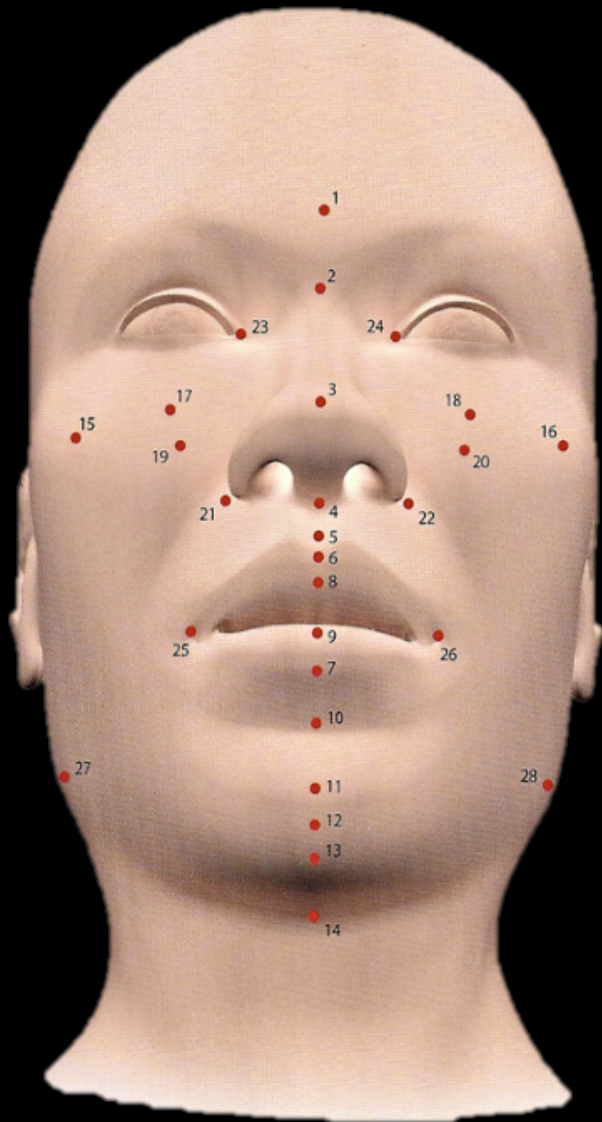
Obstrucción
de laringe
por proceso
inflamatorio



Superposición







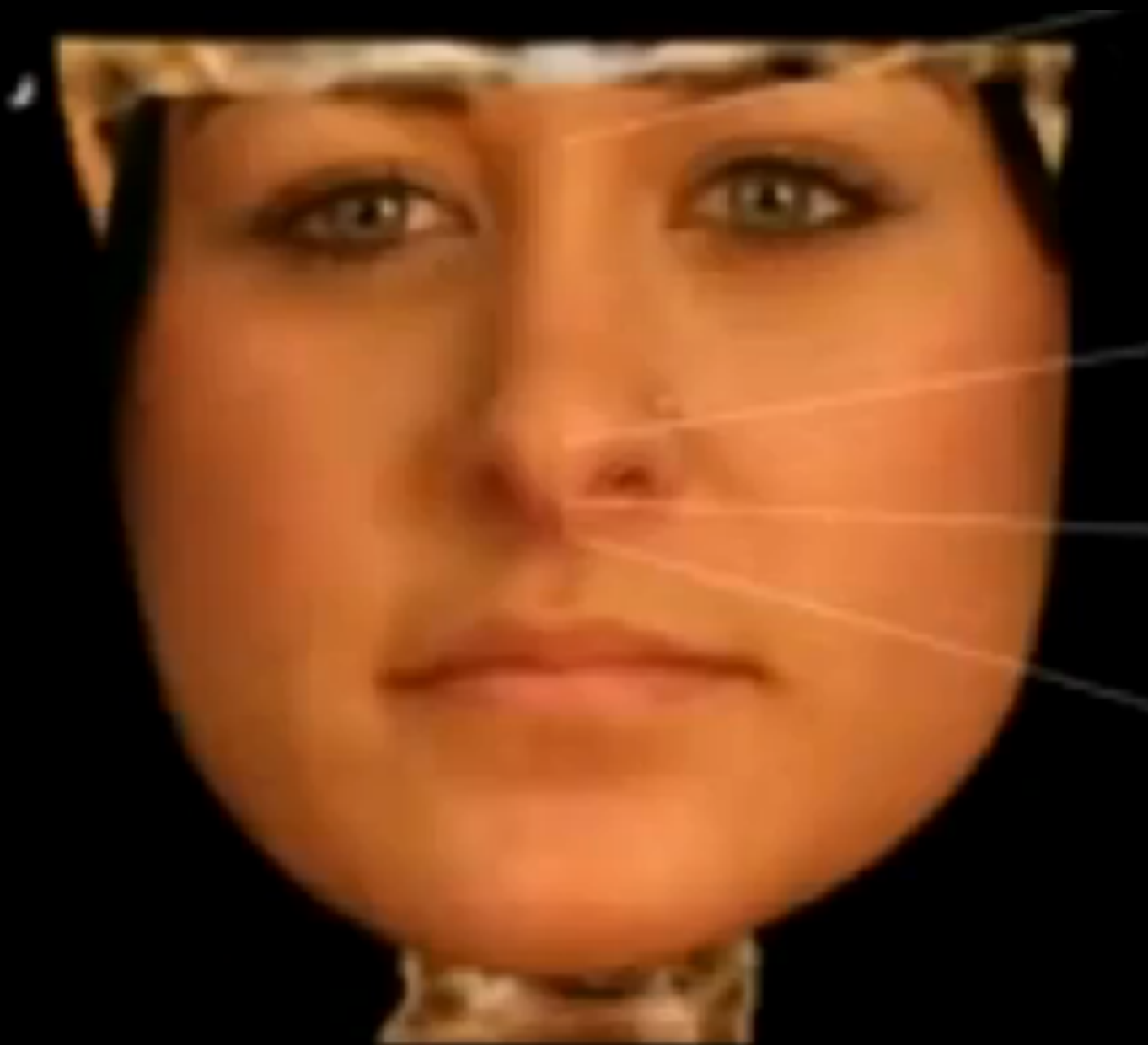
1. Glabella
2. Nasion
3. Punta nasal
4. Subnasal
5. Punto A
6. Labio superior

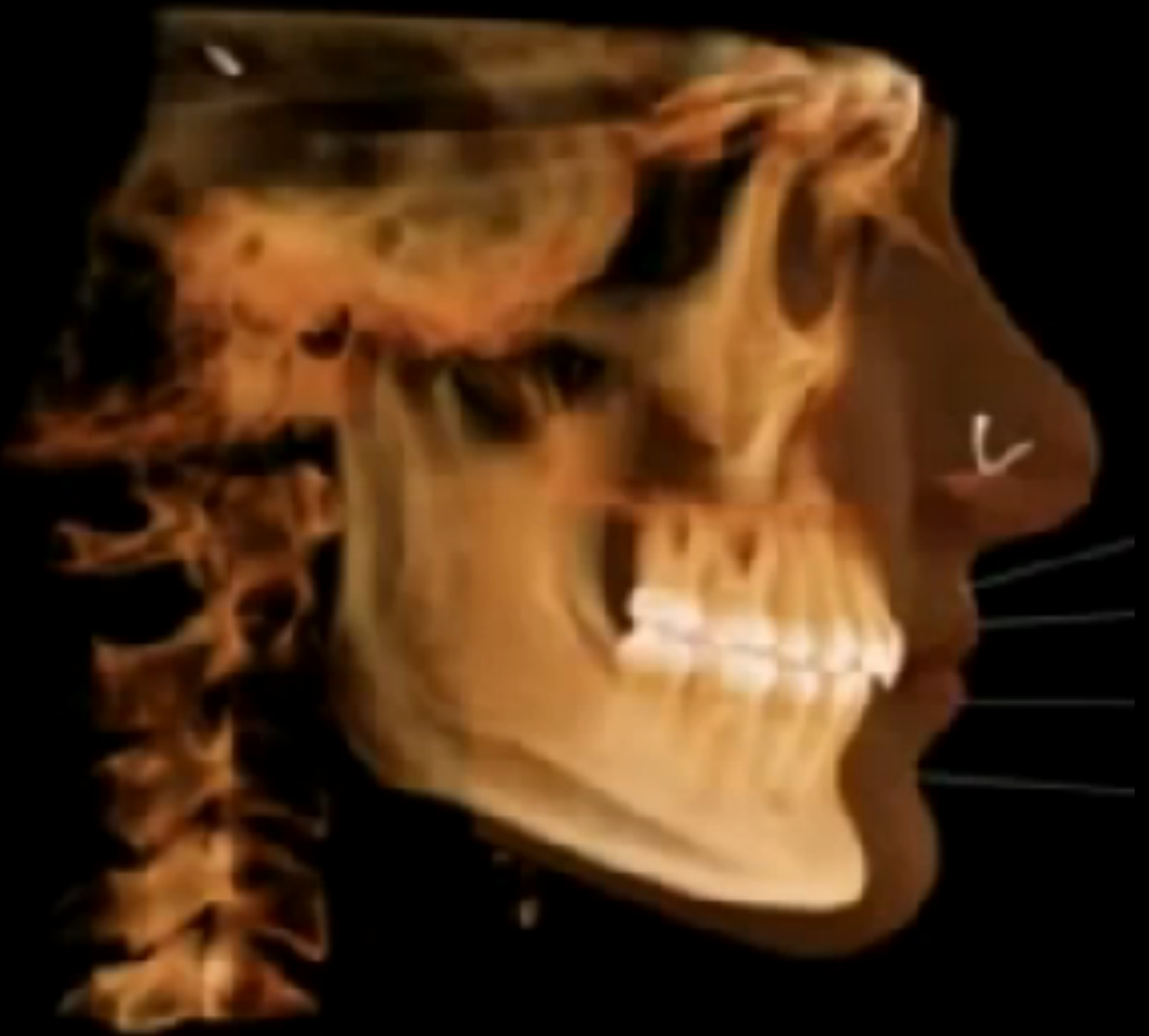
7. Labio inferior
8. Estomio superior
9. Estomio inferior
10. Punto B
11. Pogonión
12. Gnation

13. Mentoniano
14. Vértice del cuello
15. Cigomático derecho
16. Cigomático izquierdo
17. Borde orbital derecho
18. Borde orbital izquierdo

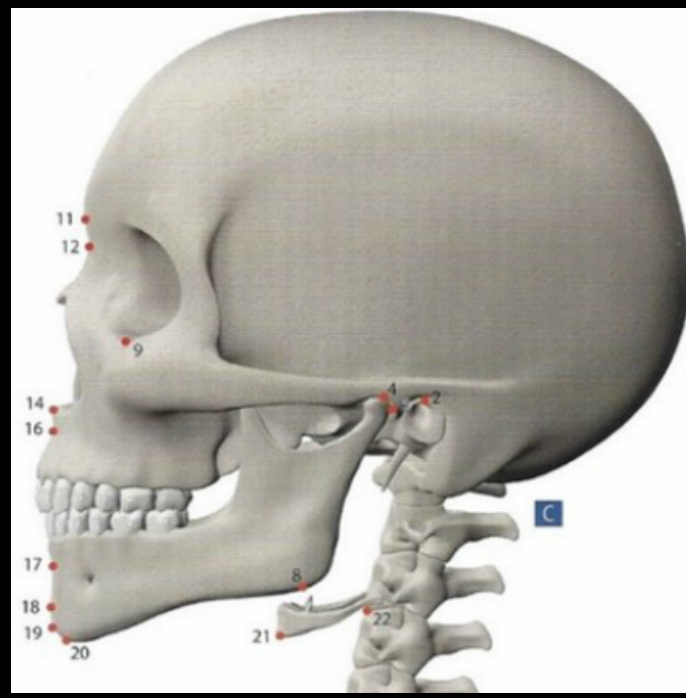
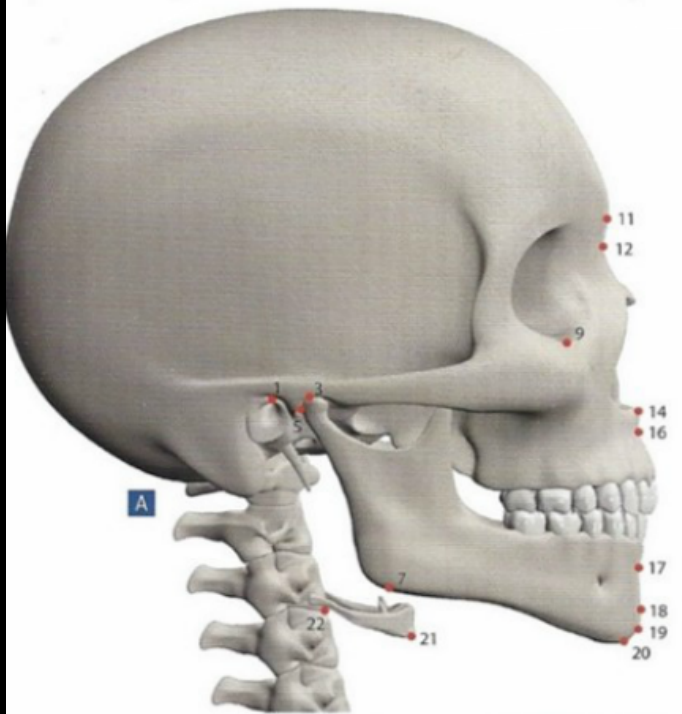
19. Subpupilar derecha
20. Subpupilar izquierda
21. Base alar derecha
22. Base alar izquierda
23. Esquina ocular derecha
24. Esquina ocular izquierda

25. Hendidura bucal derecha
26. Hendidura bucal izquierda
27. Gonio derecho
28. Gonio izquierdo
29. Centro de úvula

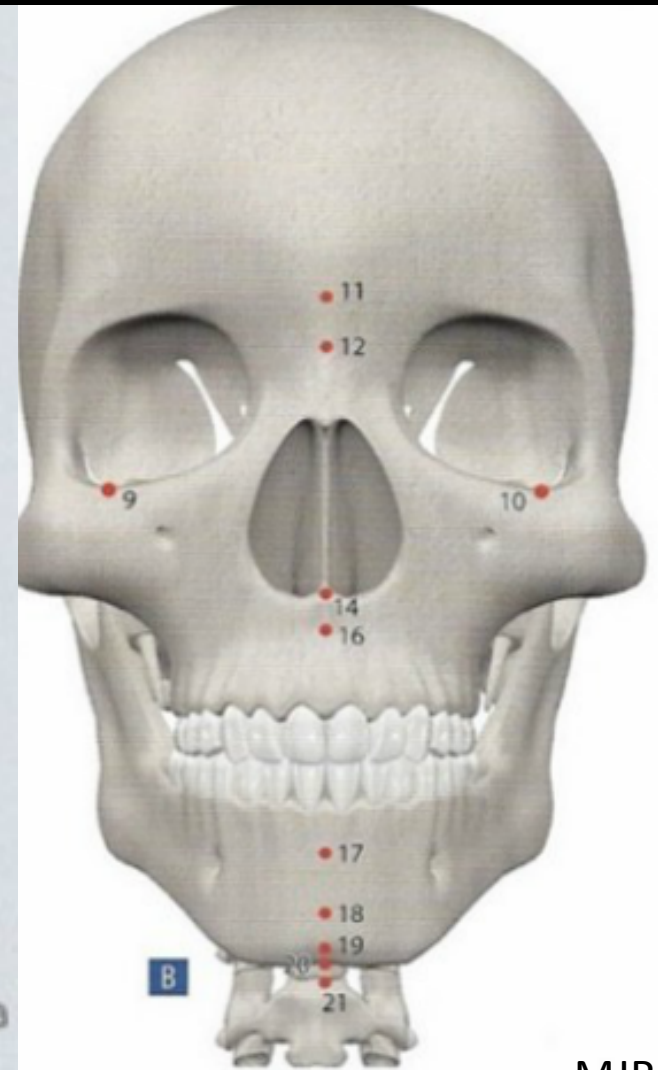




Puntos esqueléticos

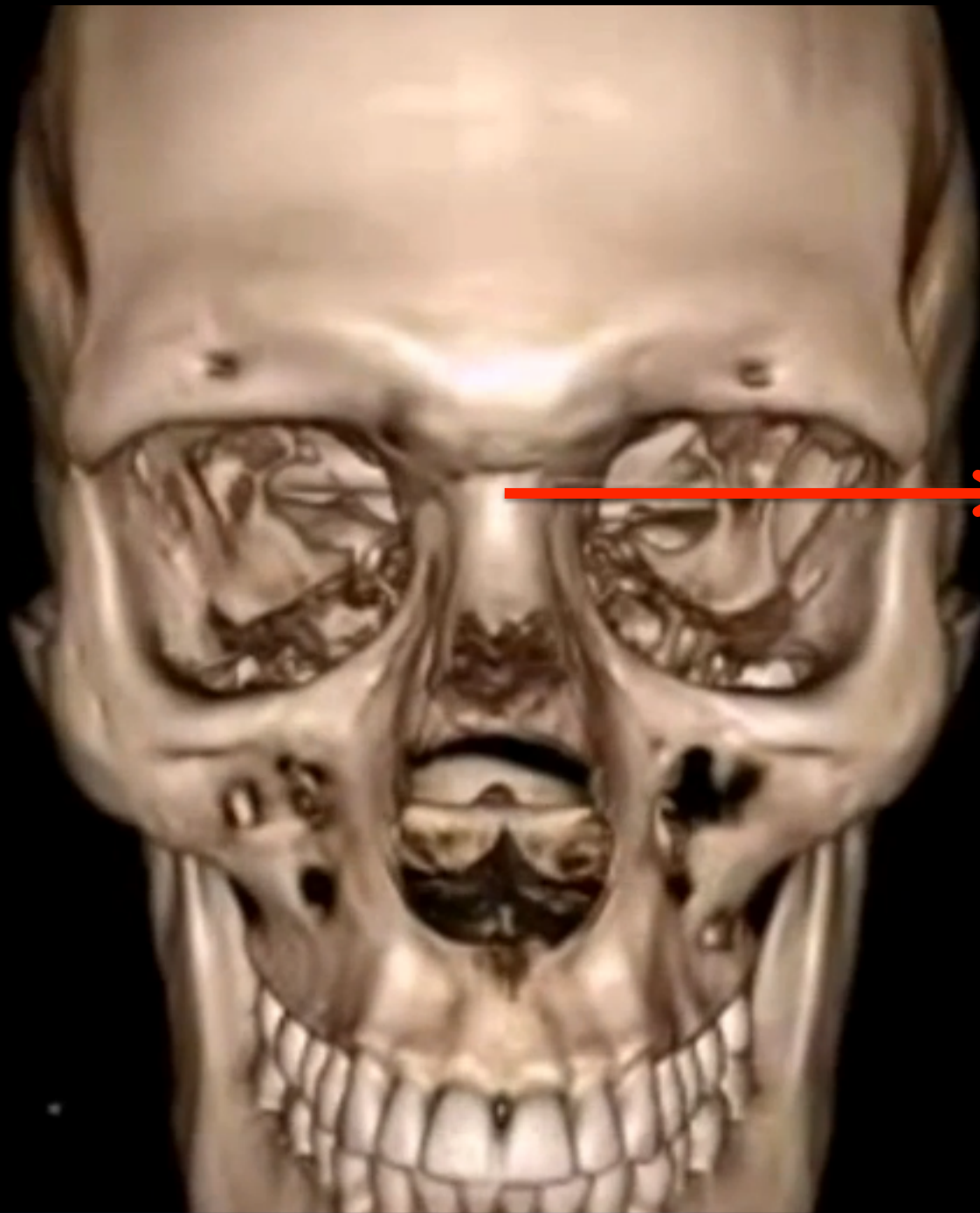


1. Porción derecho
2. Porción izquierdo
3. Cóndilo derecho
4. Cóndilo izquierdo
5. Articular derecho
6. Articular izquierdo
7. Gonió derecho
8. Gonió izquierdo
9. Órbita derecha
10. Órbita izquierda
11. Glabella
12. Nasion
13. Basión
14. Espina nasal anterior
15. Espina nasal posterior
16. Punto A
17. Punto B
18. Pogonión
19. Gnación
20. Mentoniano
21. Hioídes
22. Borde anteroinferior de la vértebra C4

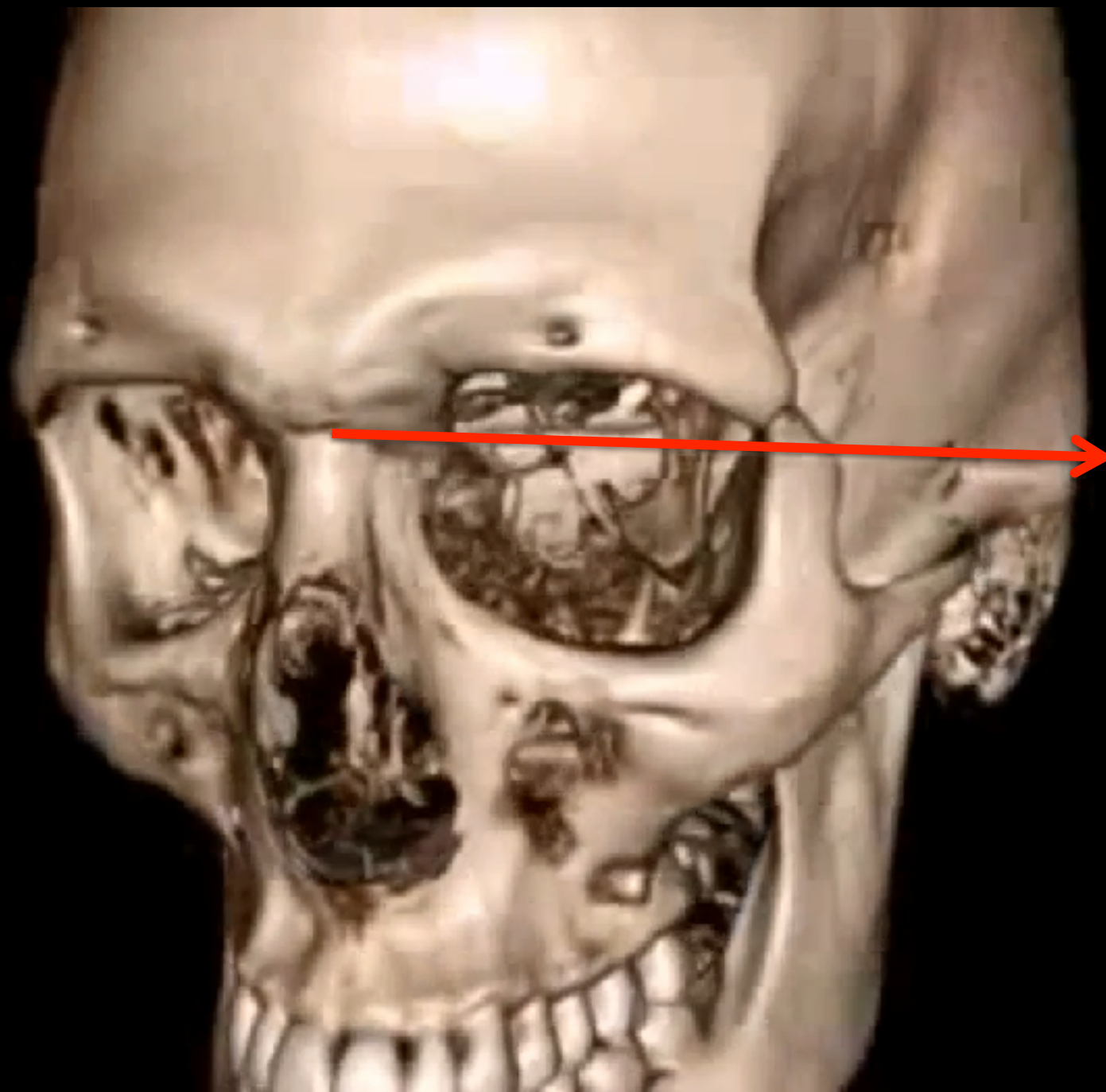




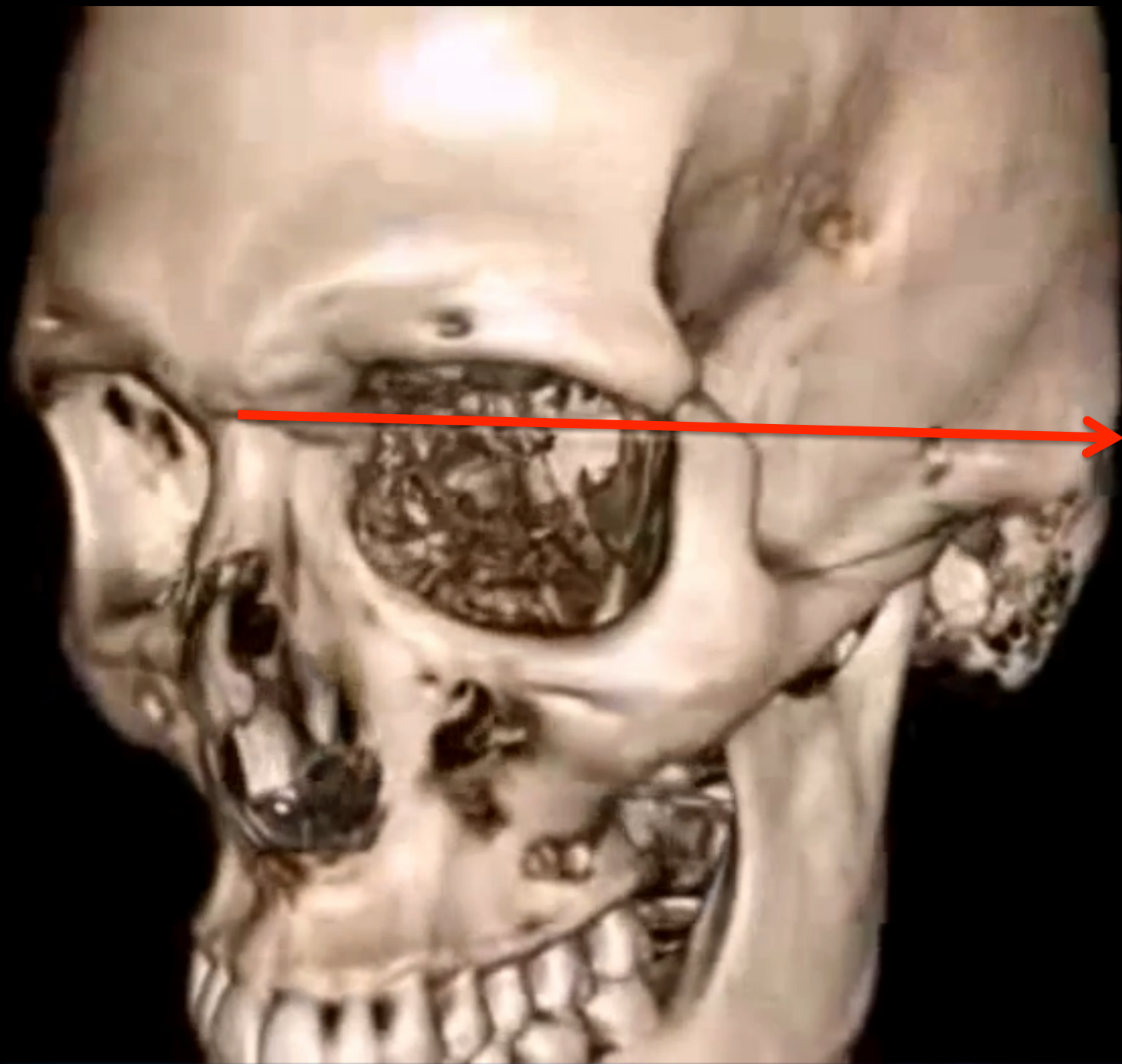
Nasion



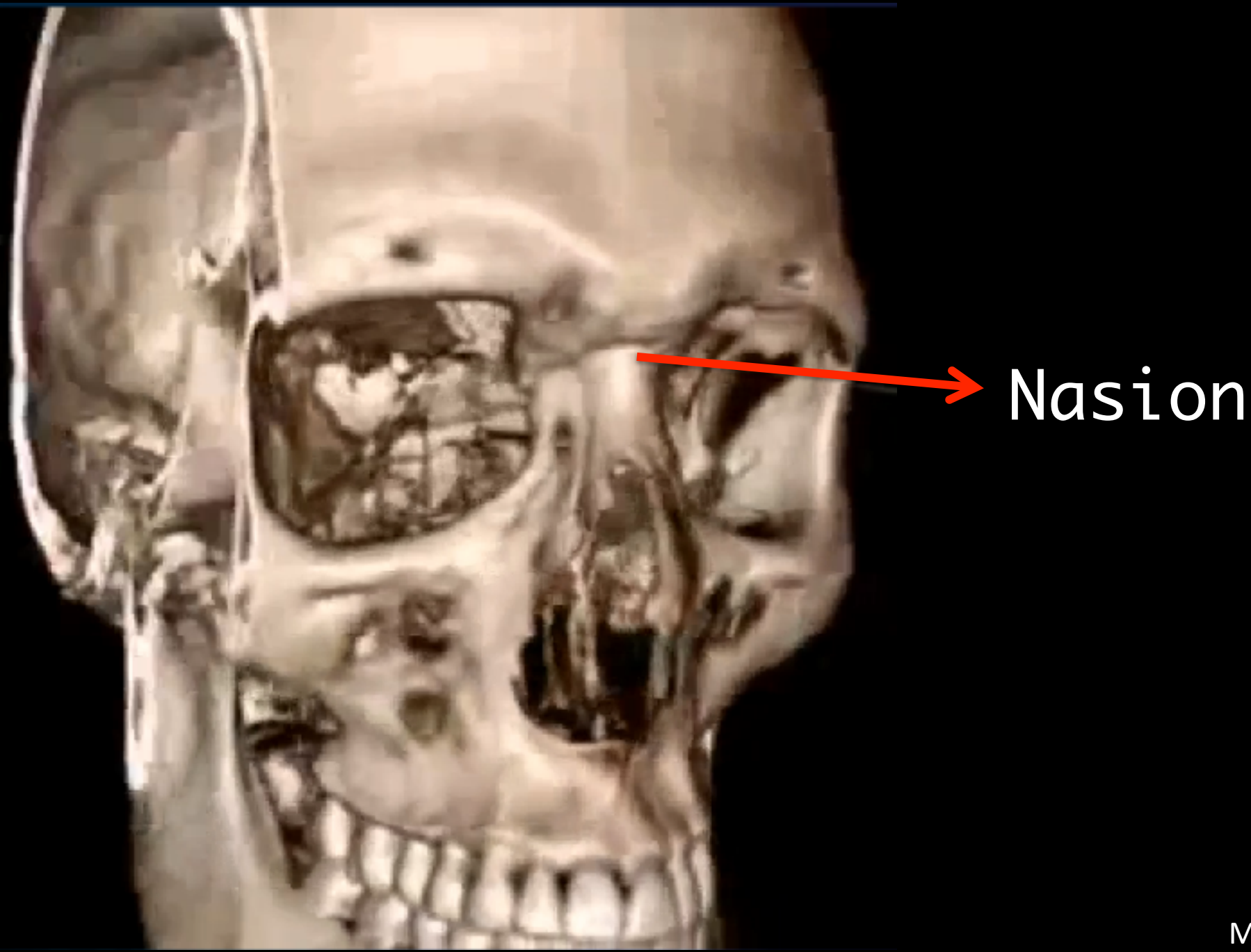
Nasion

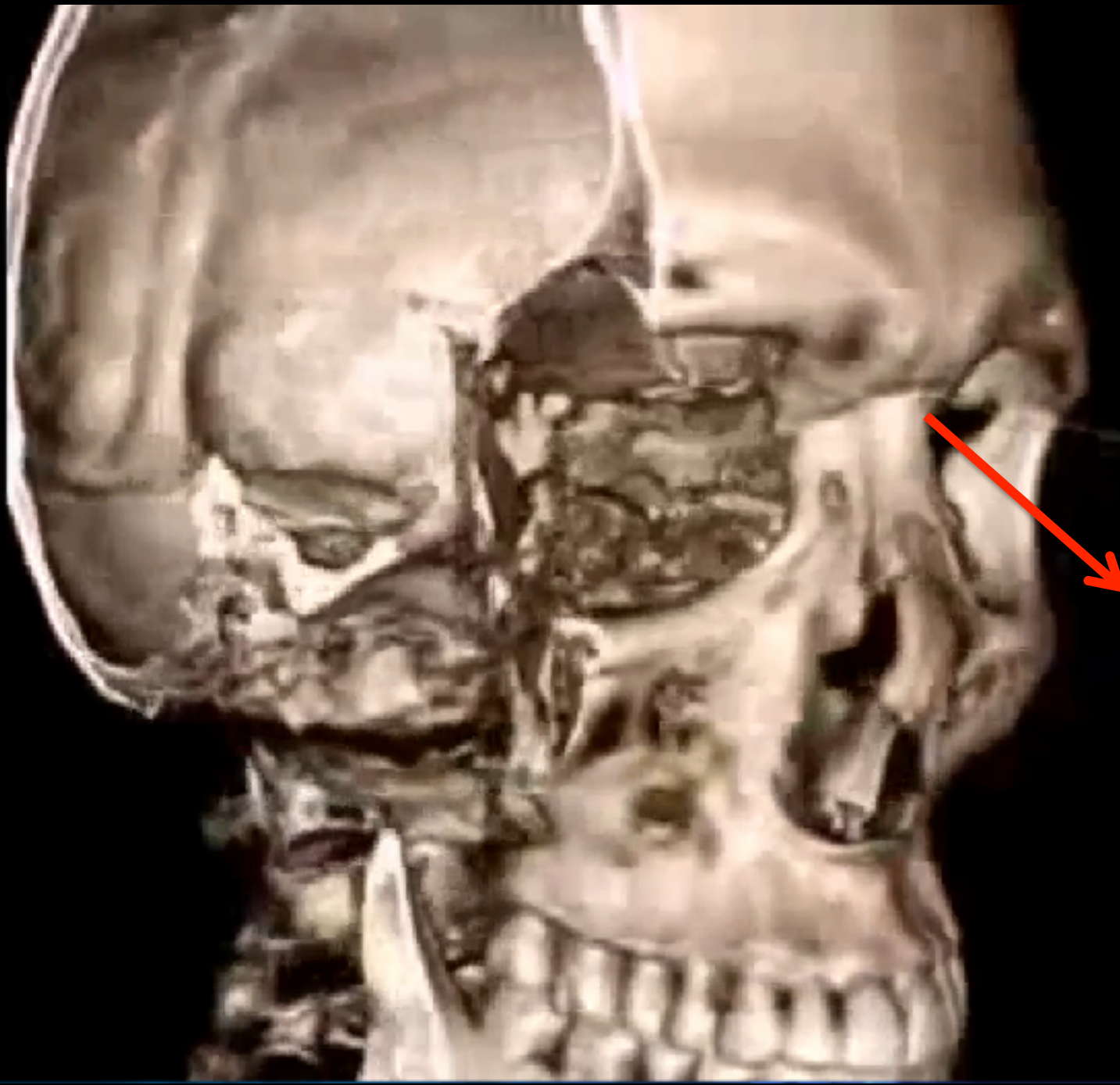


Nasion

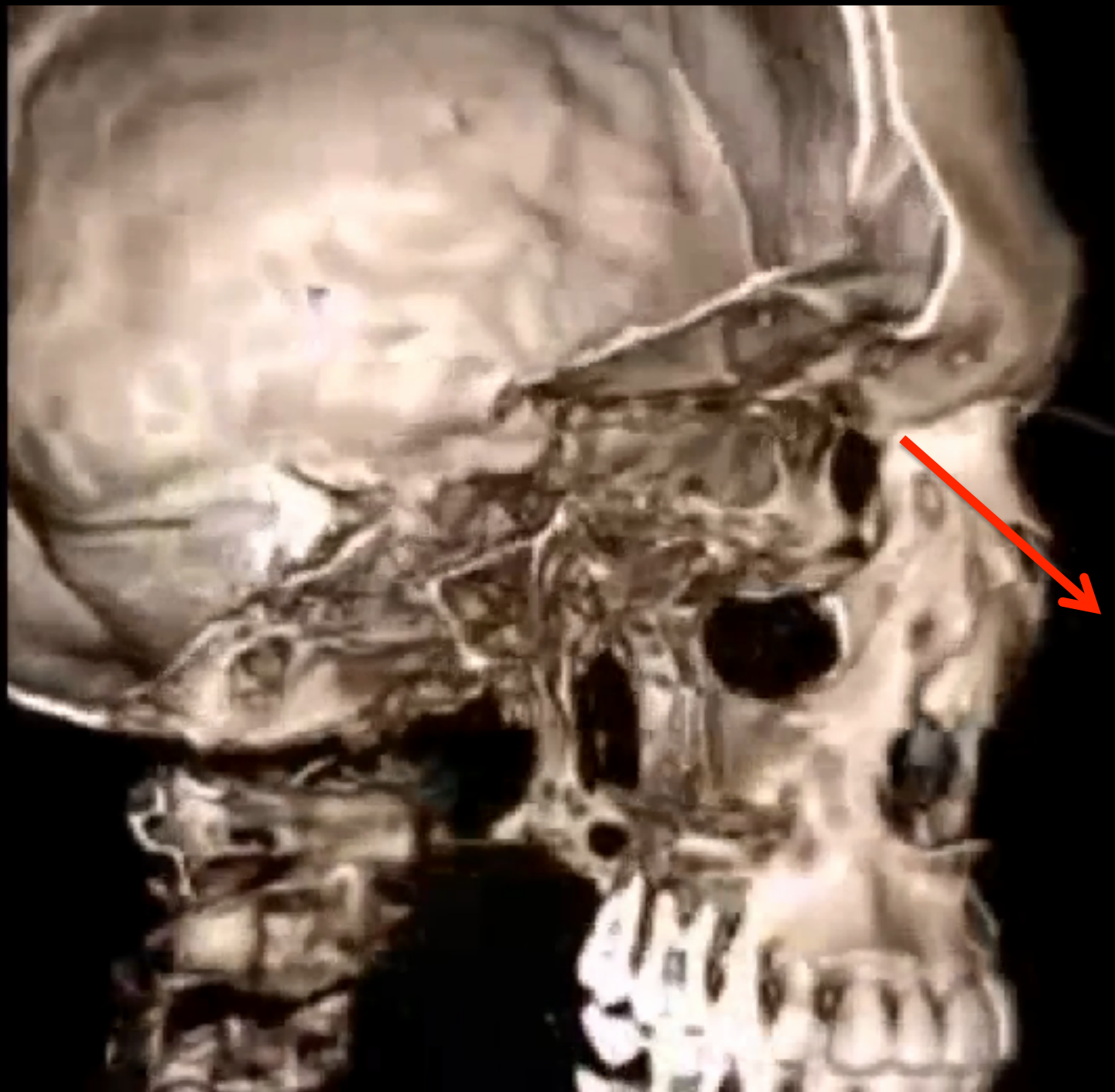


Nasion





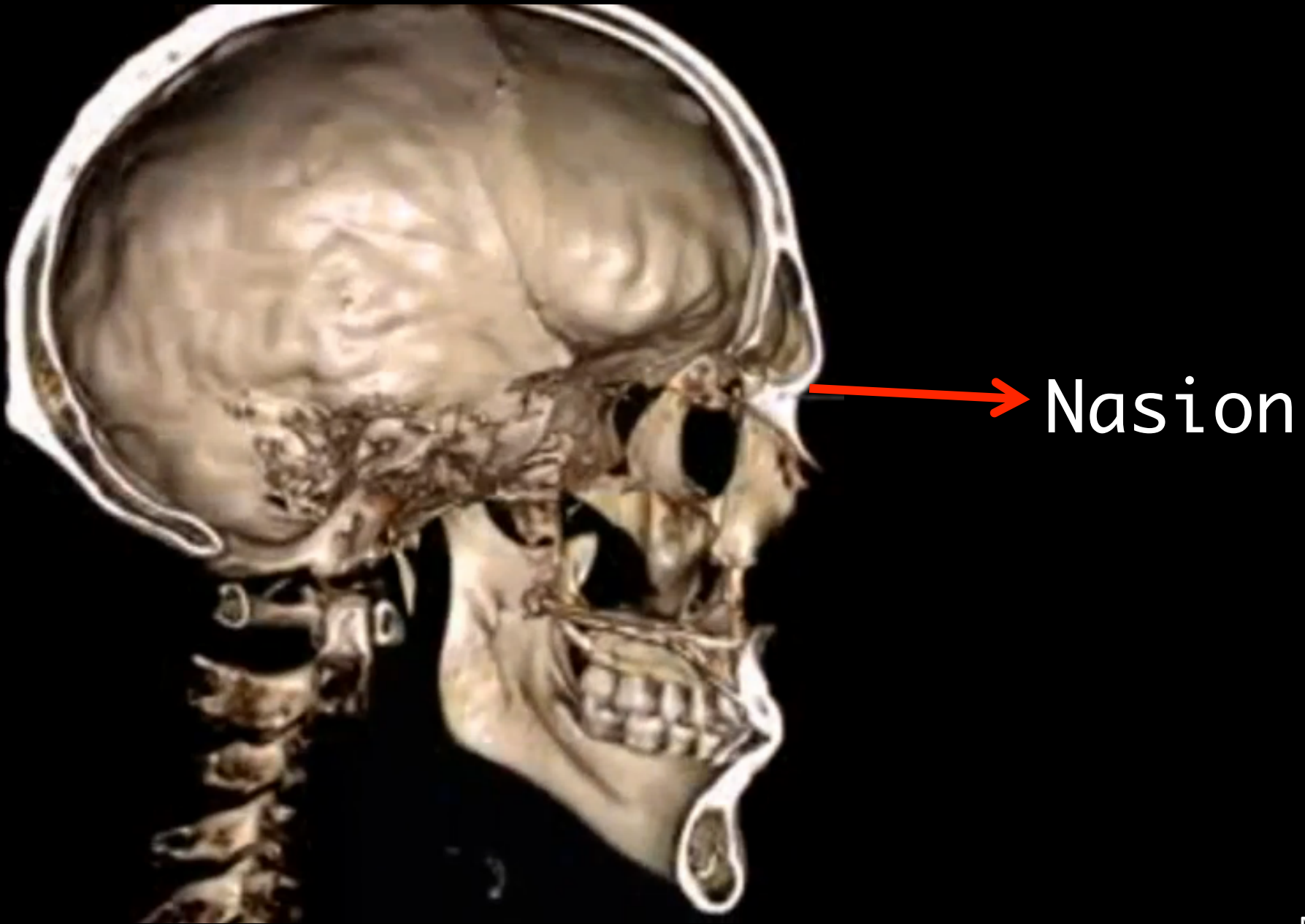
Nasion



Nasion



Nasion

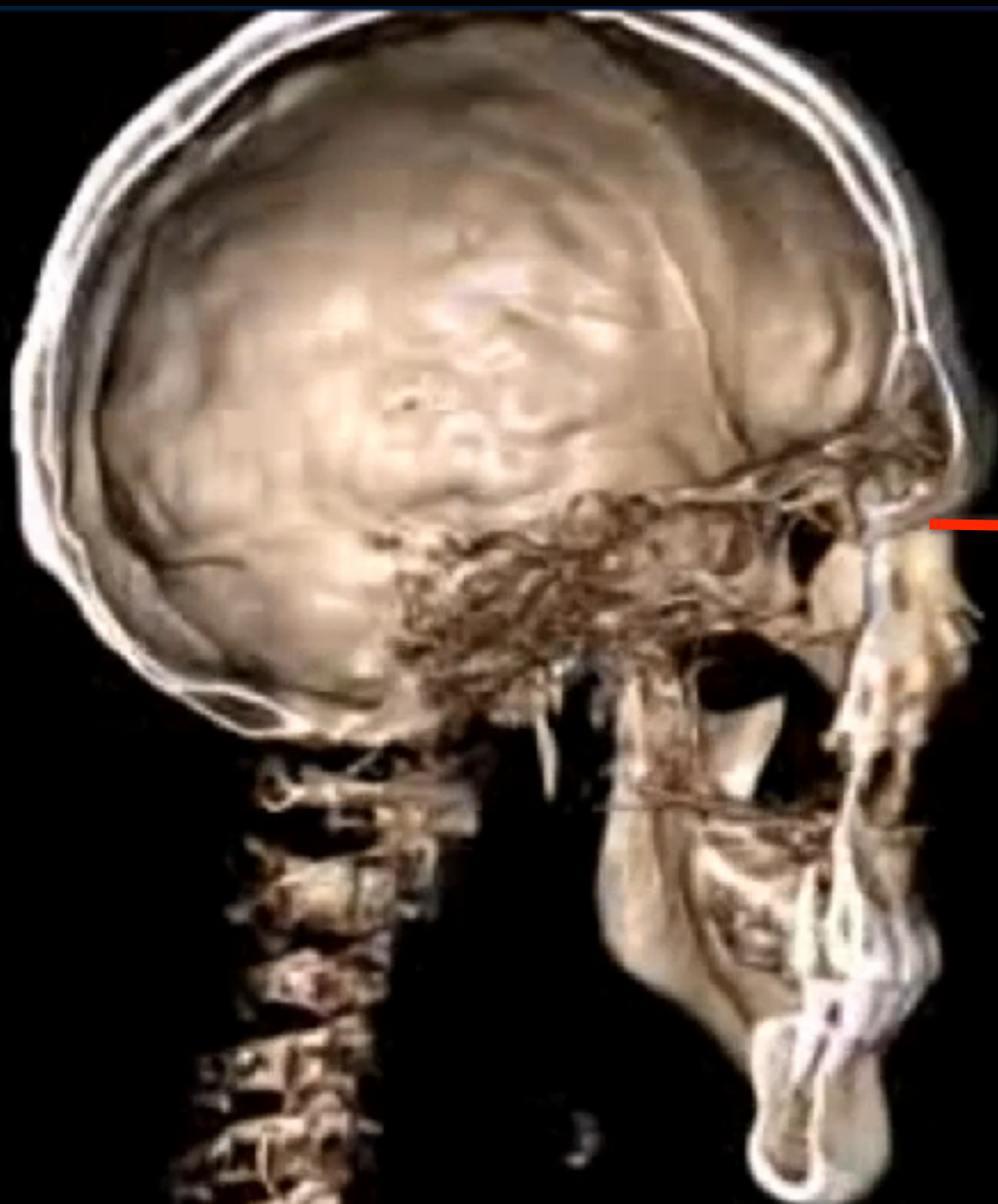




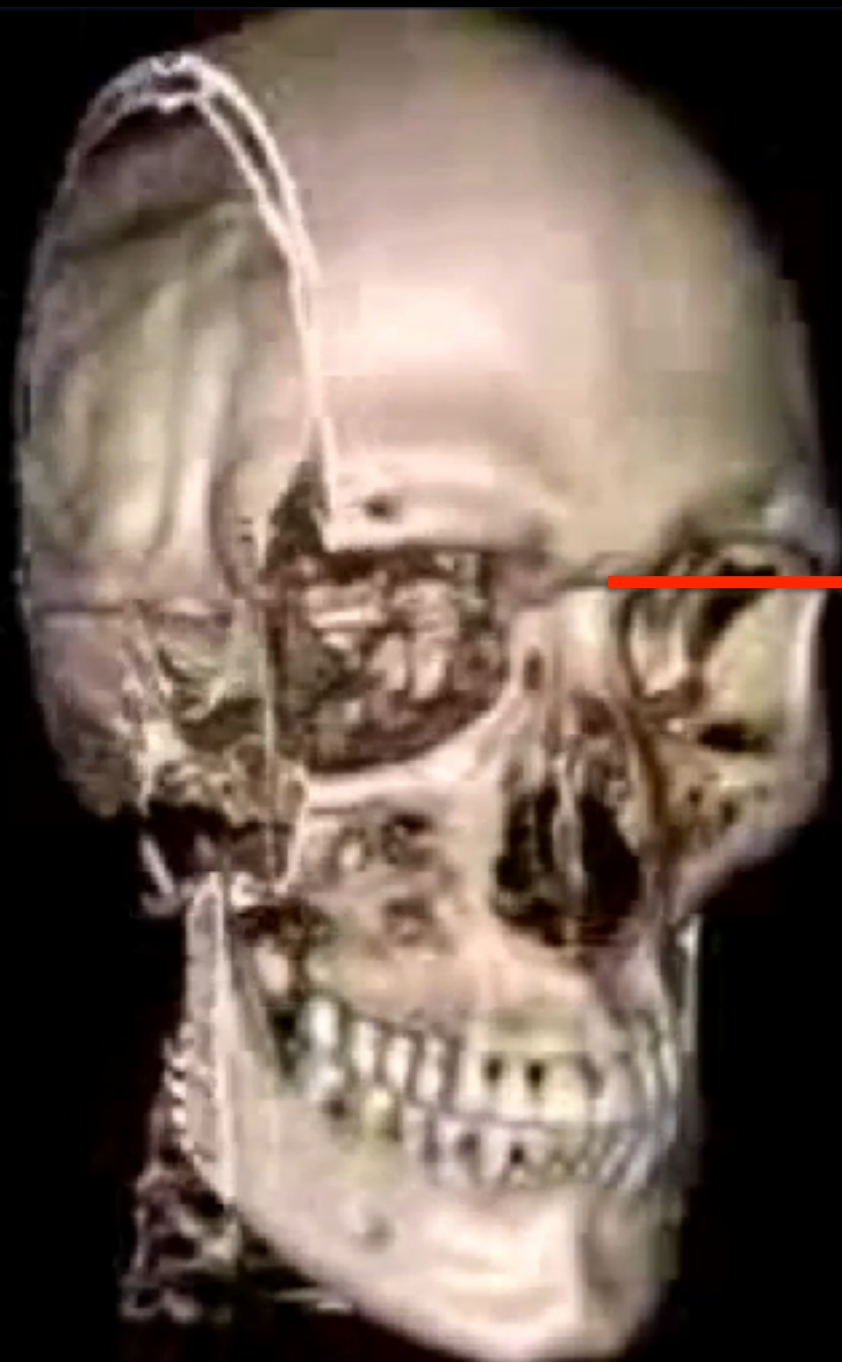
Nasion



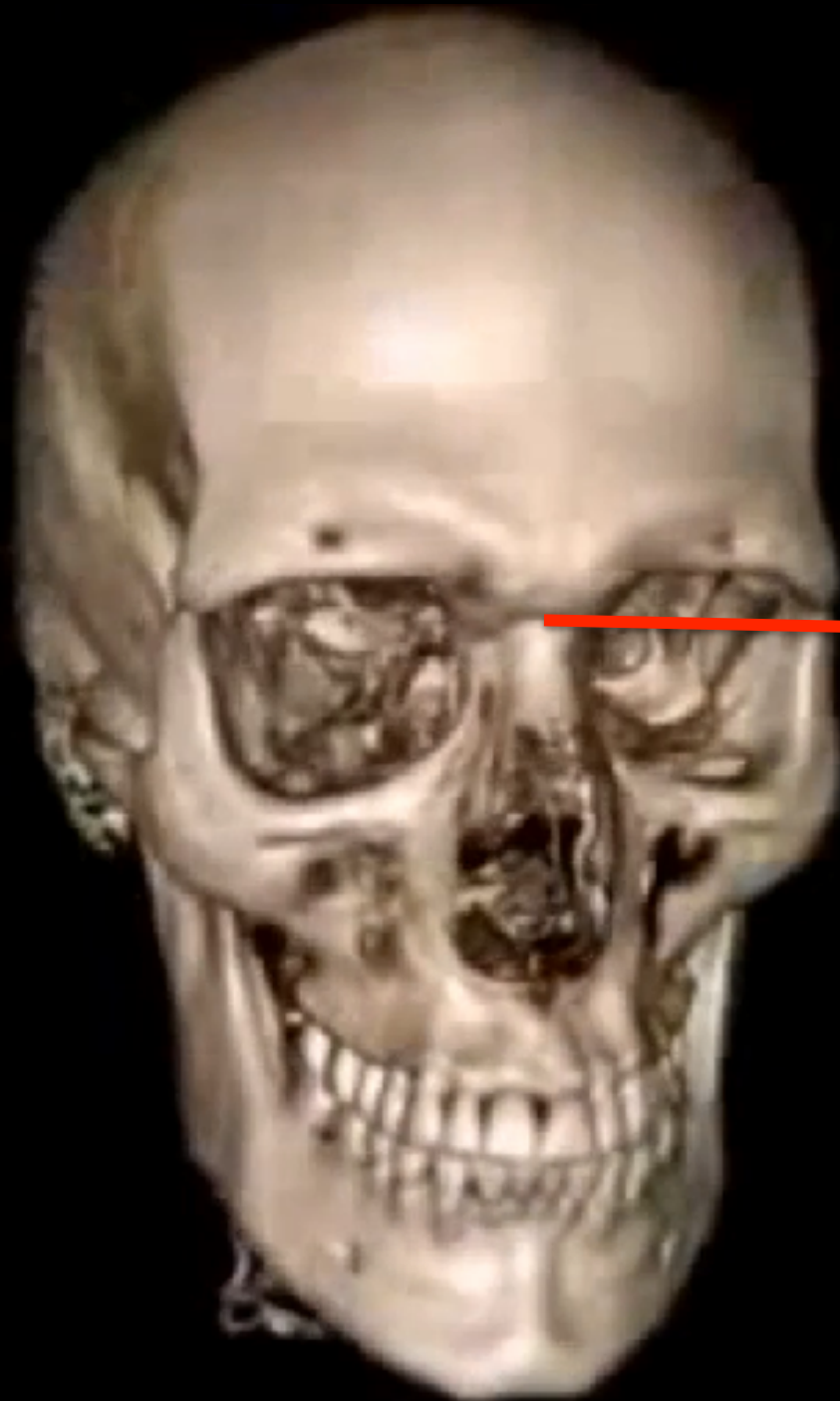
Nasion



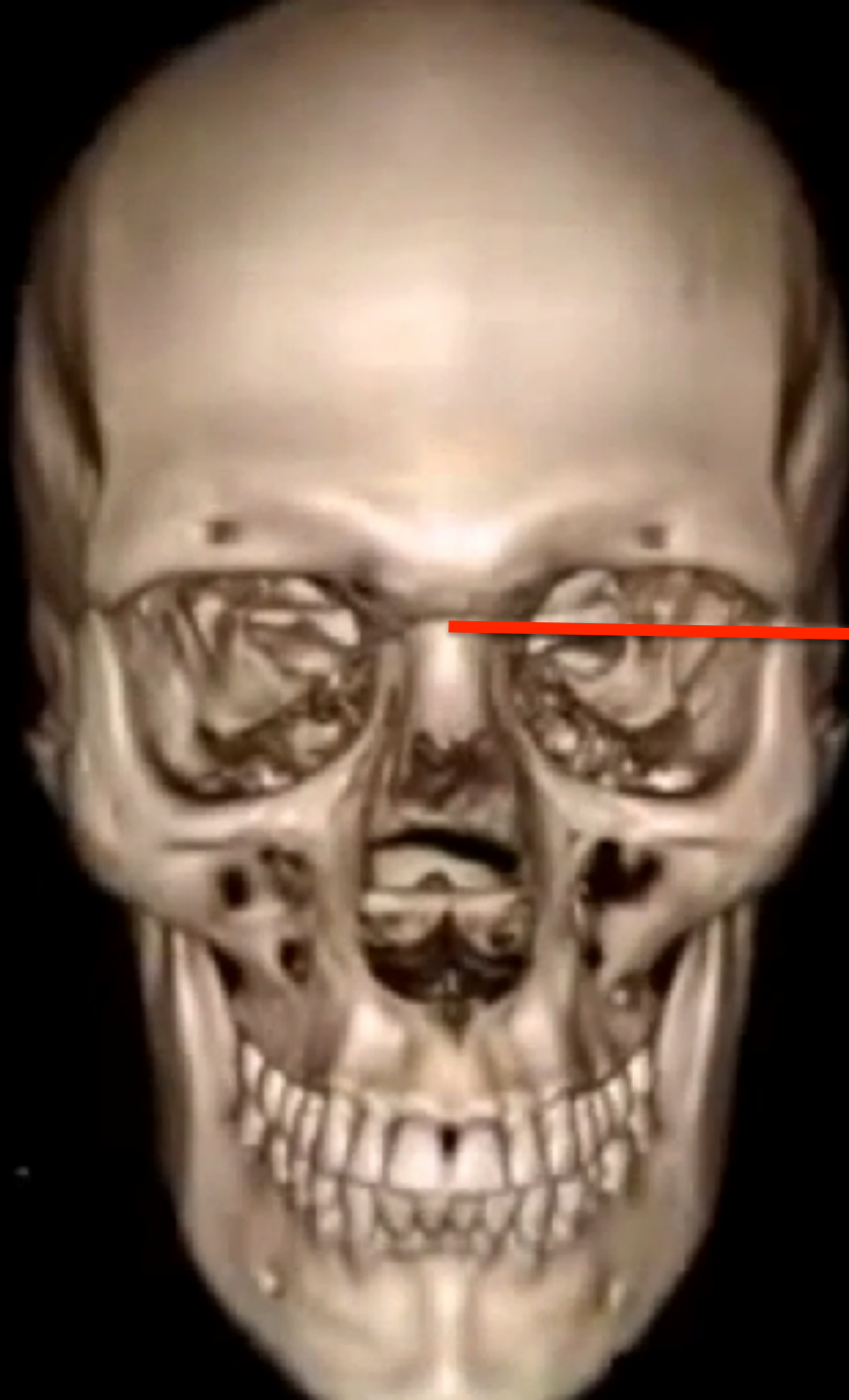
→ Nasion



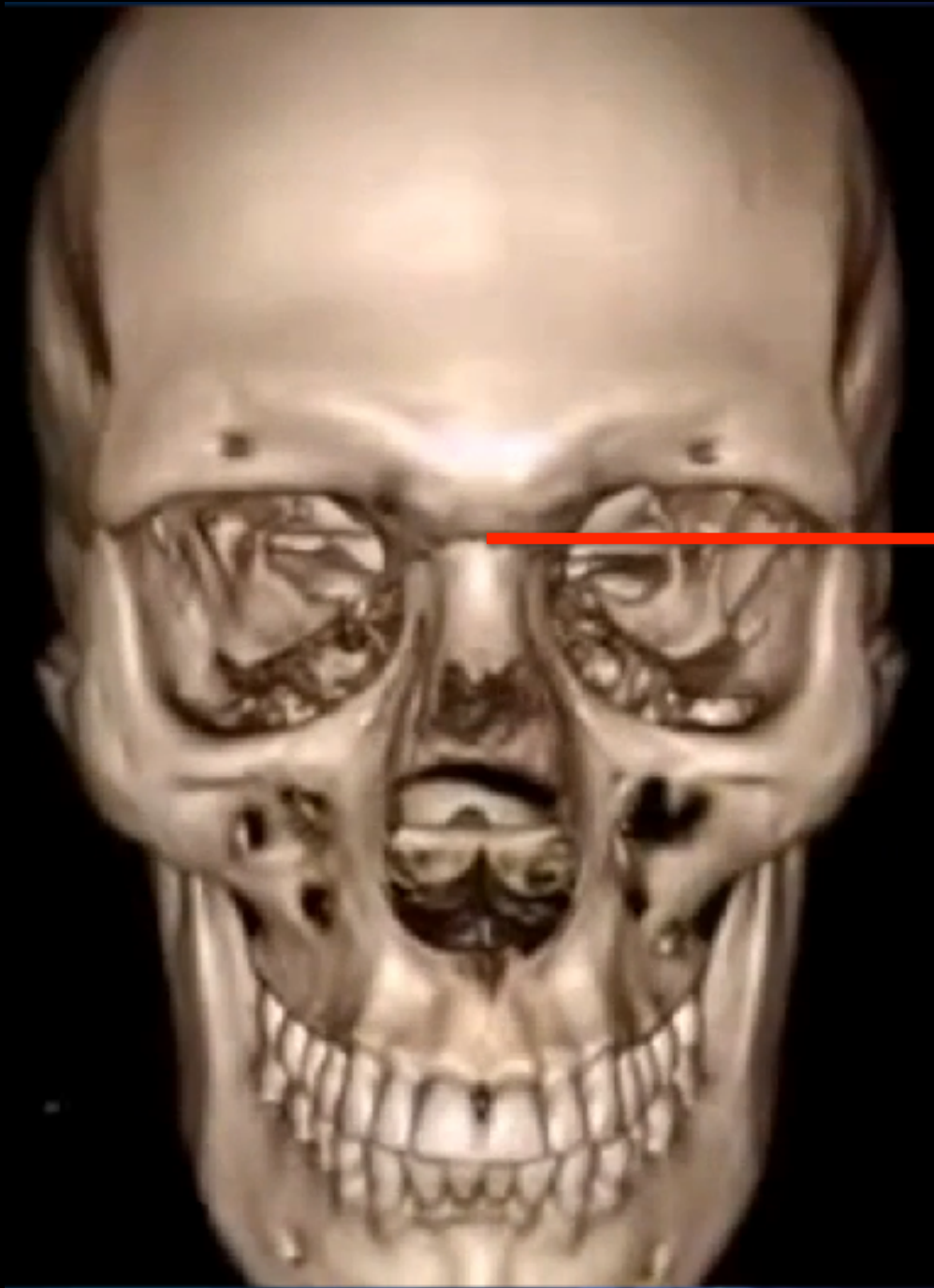
→ Nasion



Nasion



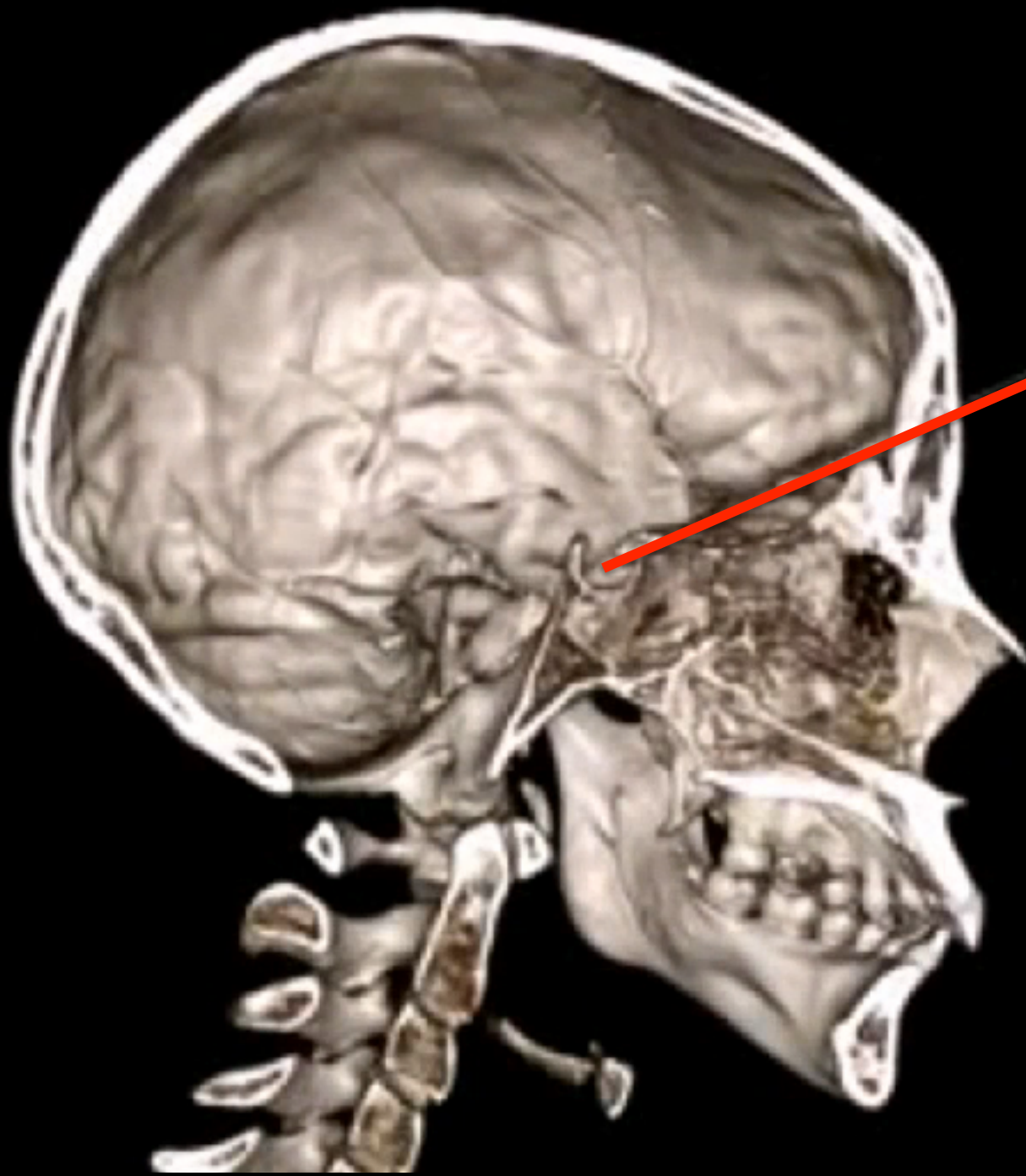
Nasion



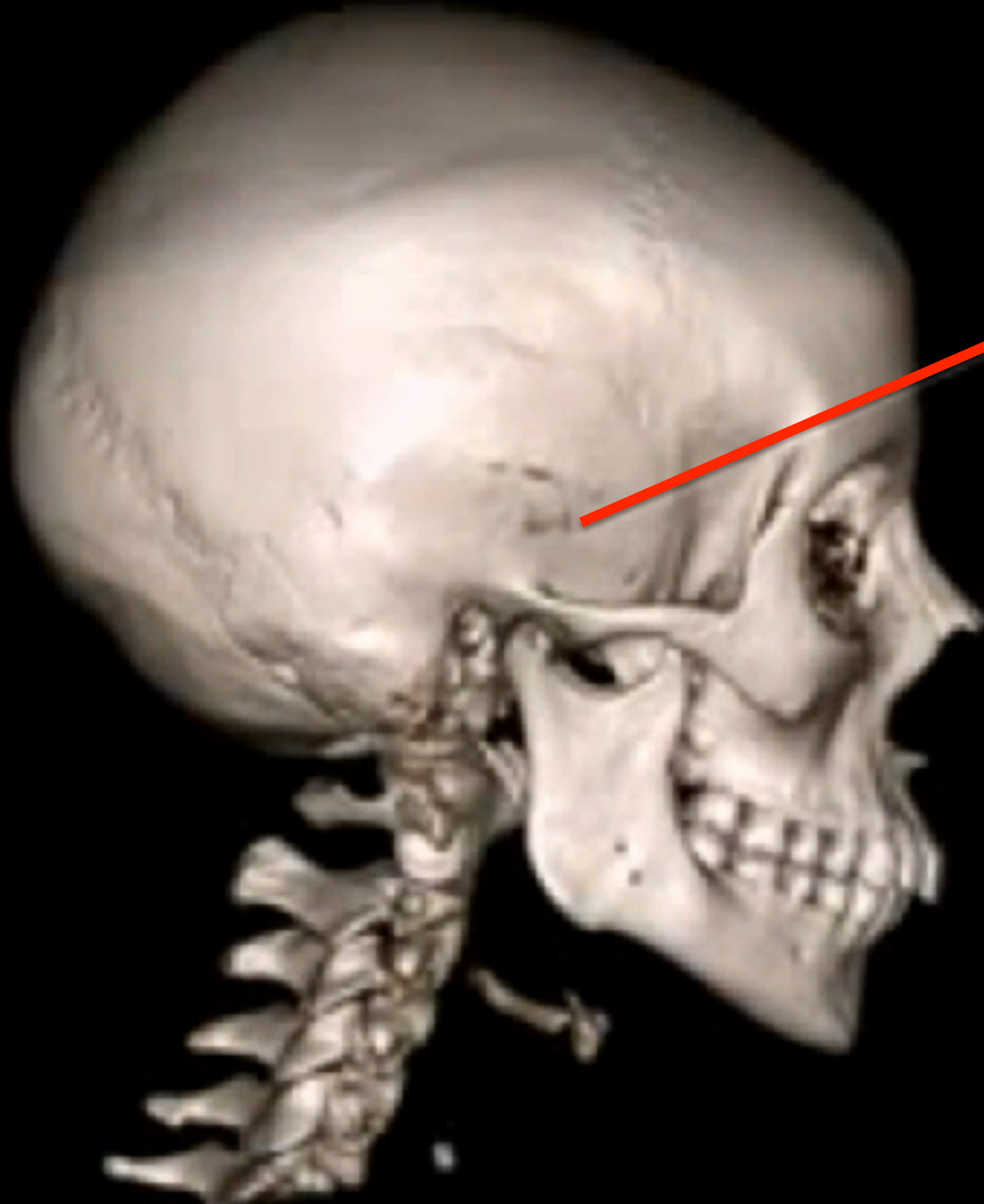
Nasion



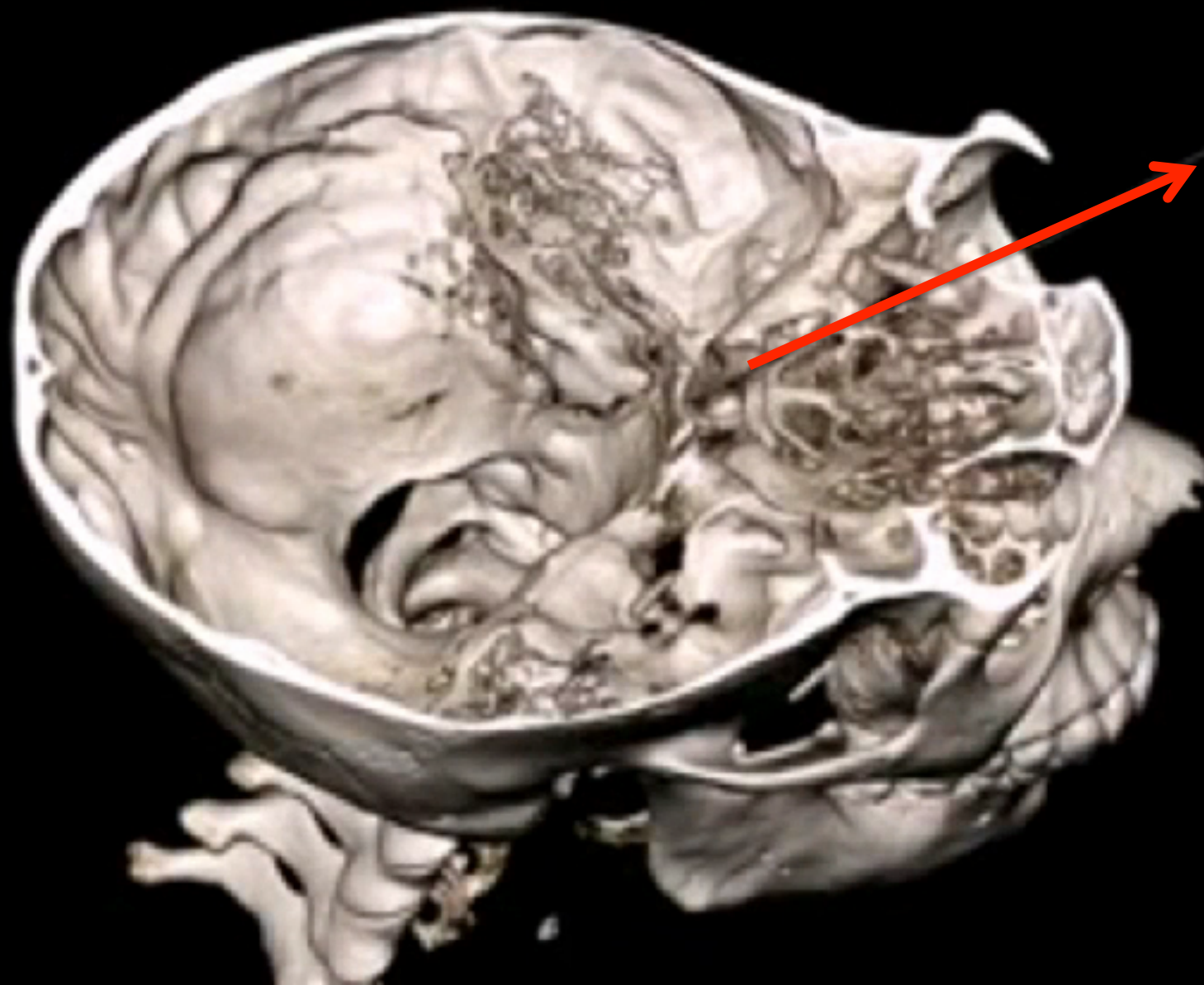
Silla turca



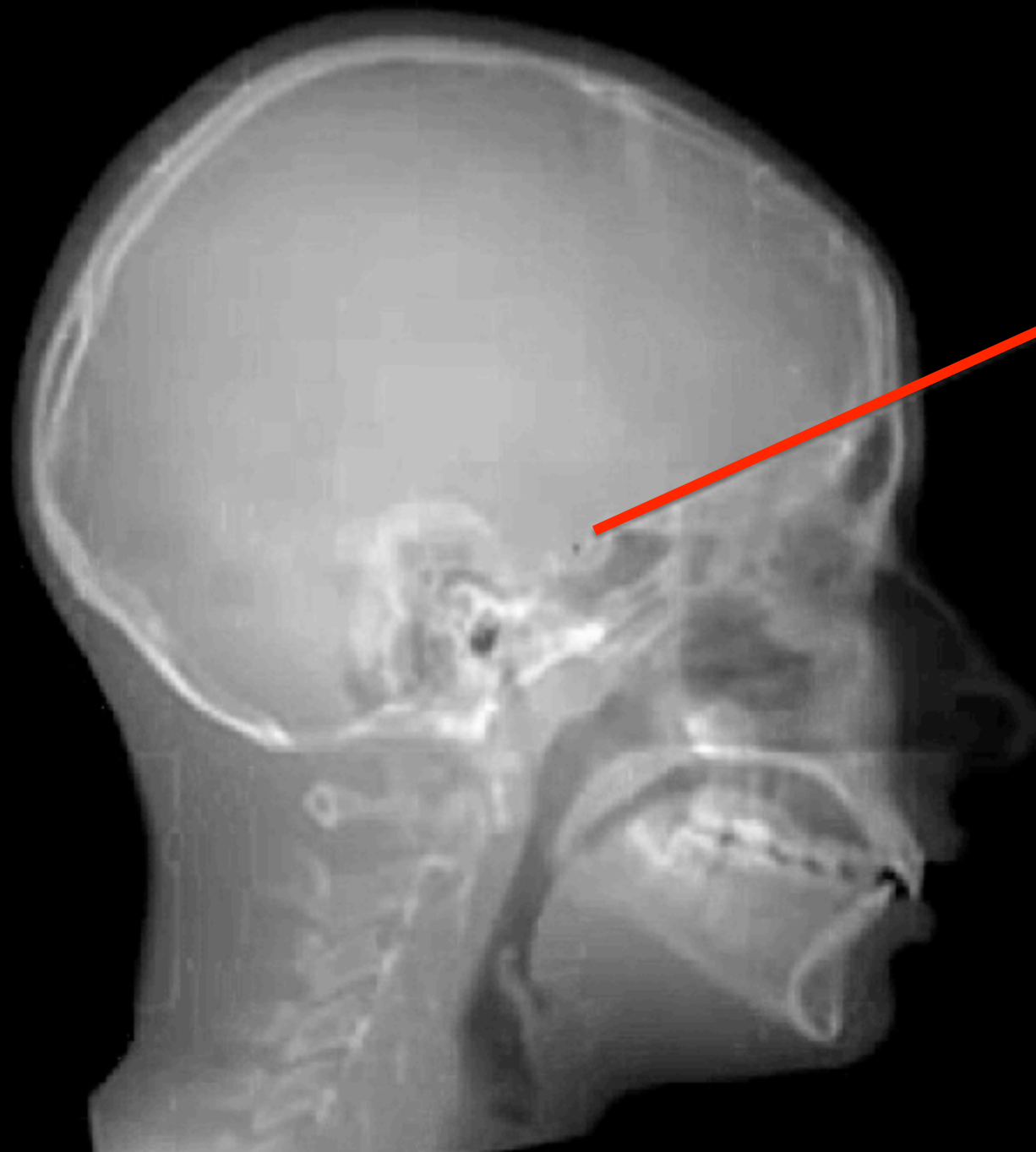
Silla
turca



Silla
turca



Silla
turca

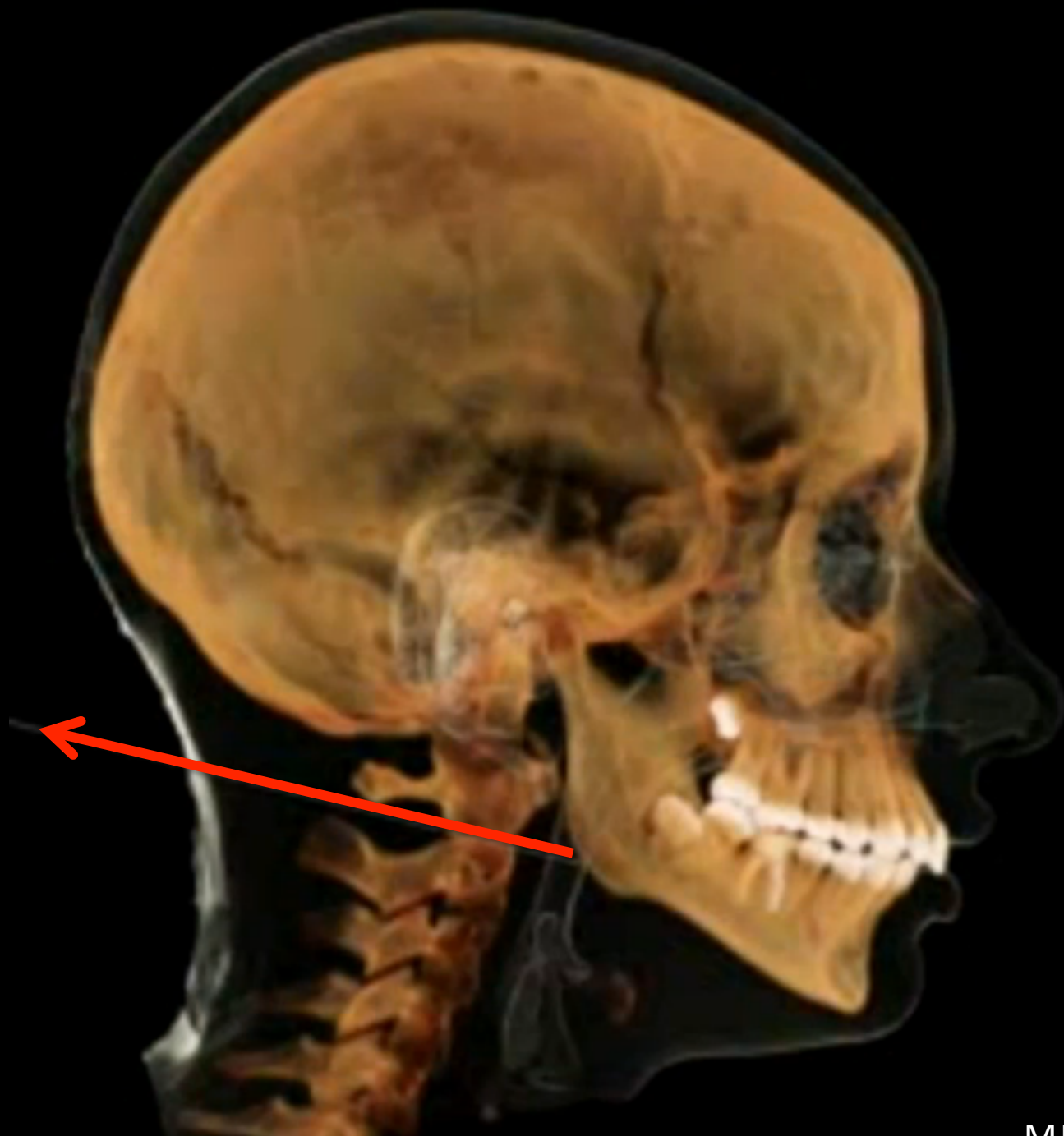


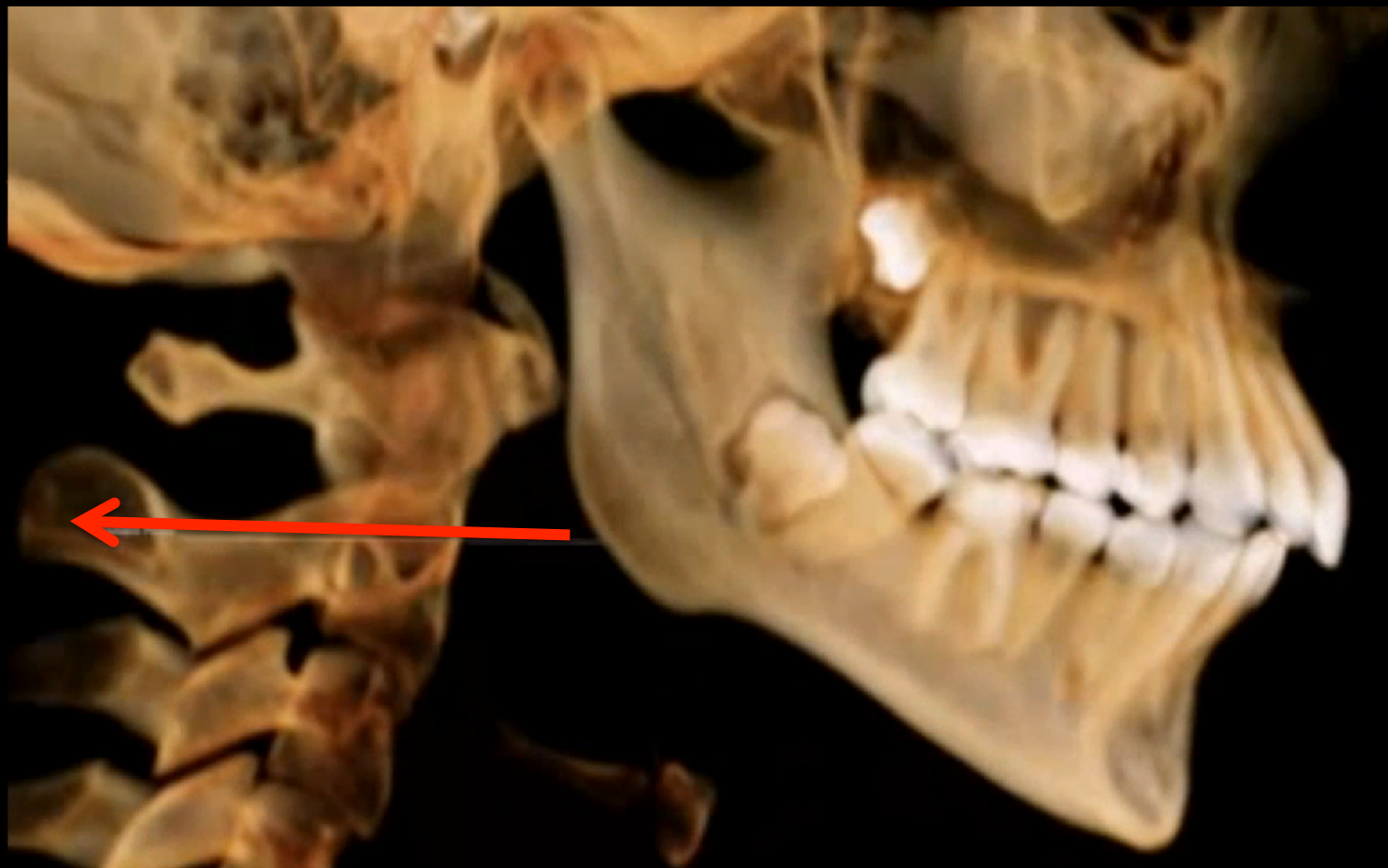
Silla
turca

Gonion



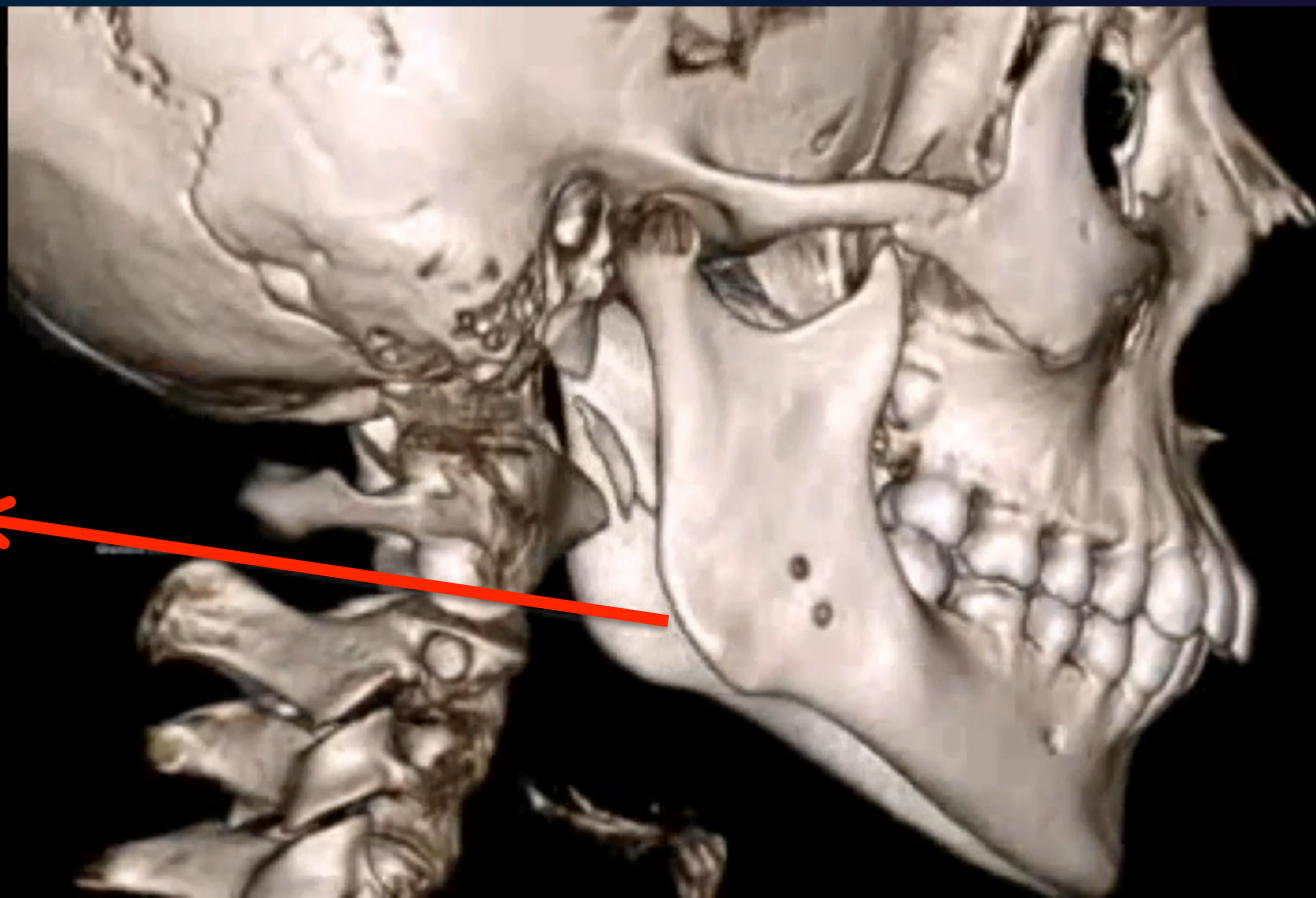
Gonion



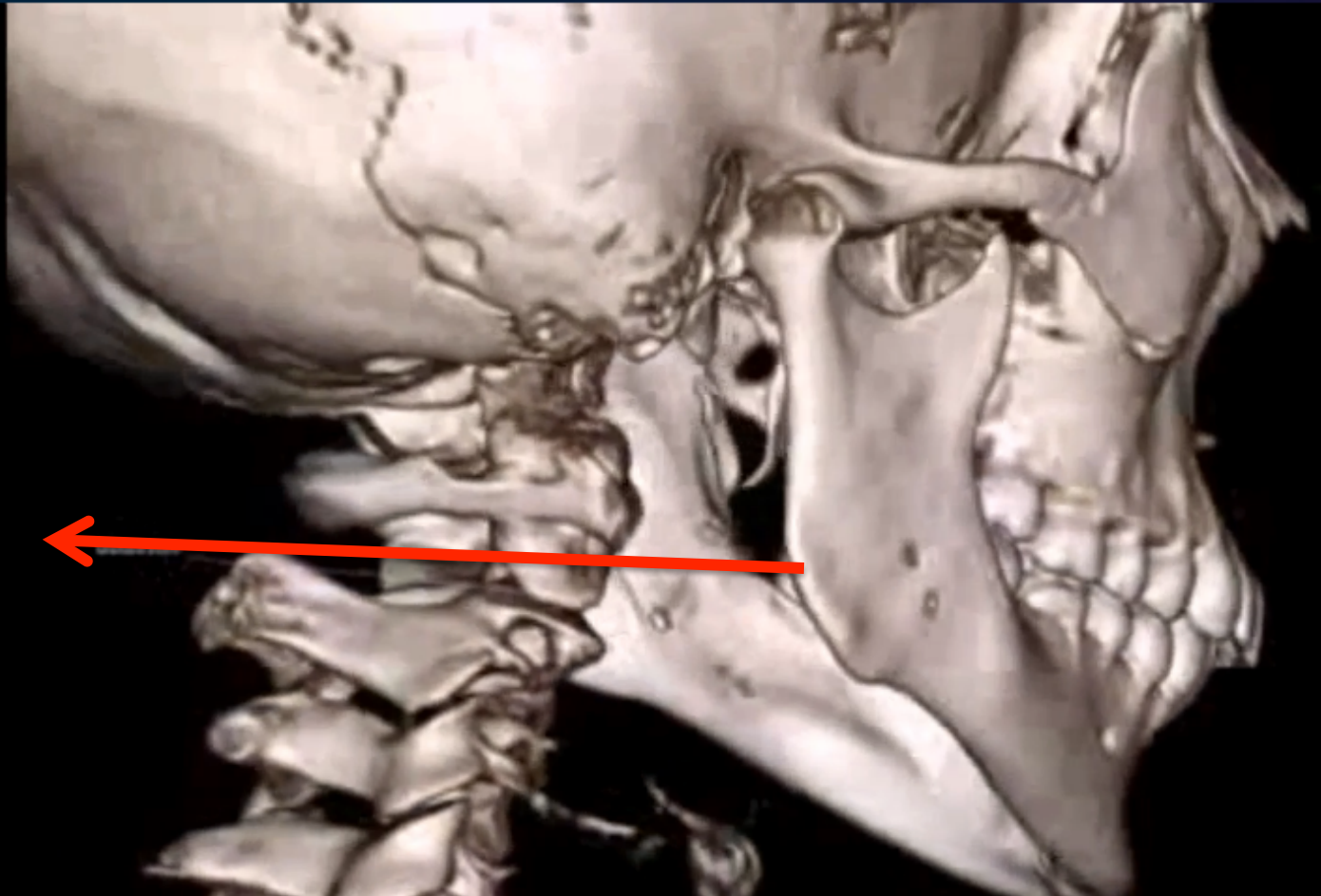


Gonion

Gonion



Gonion

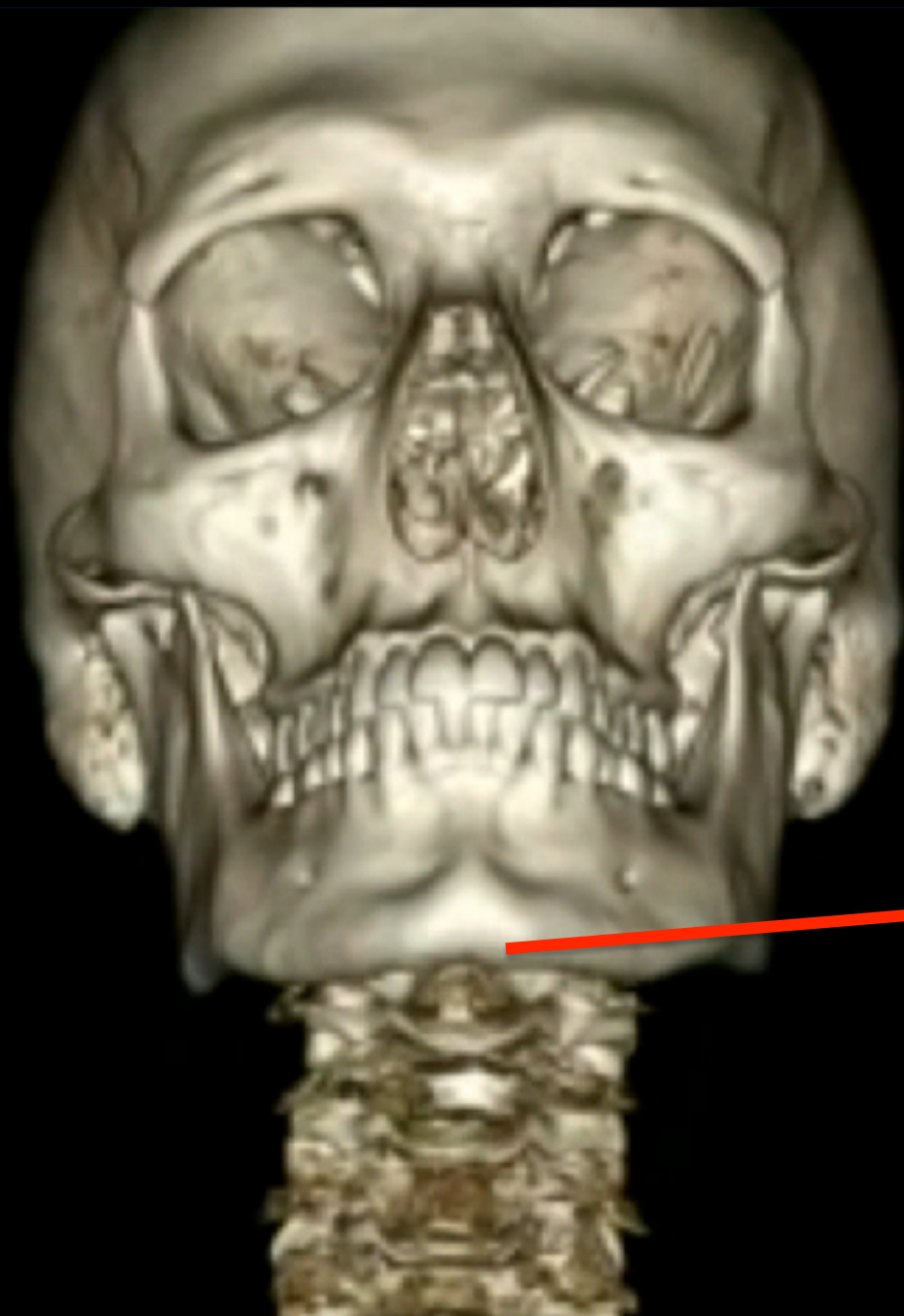


Gonion

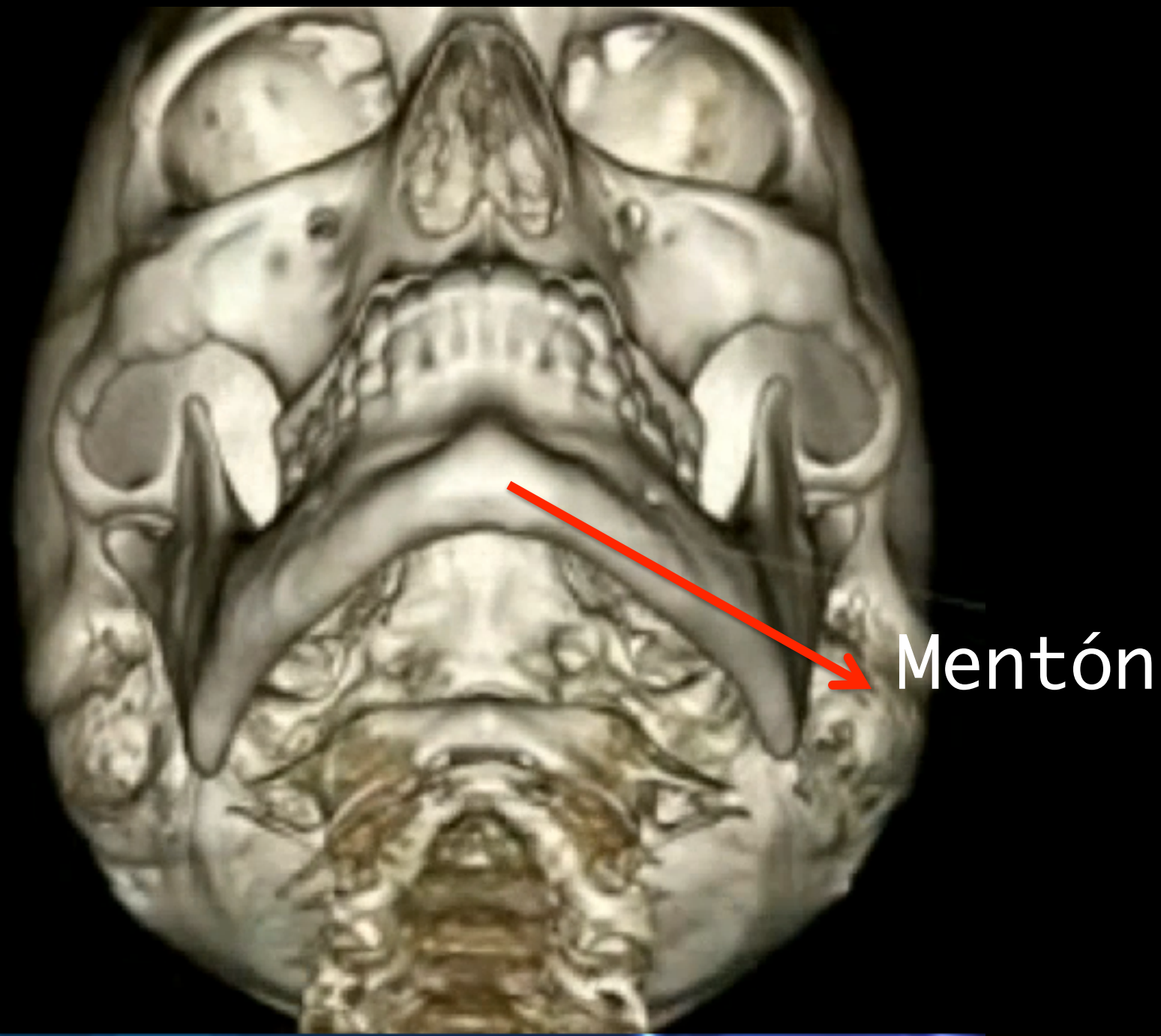




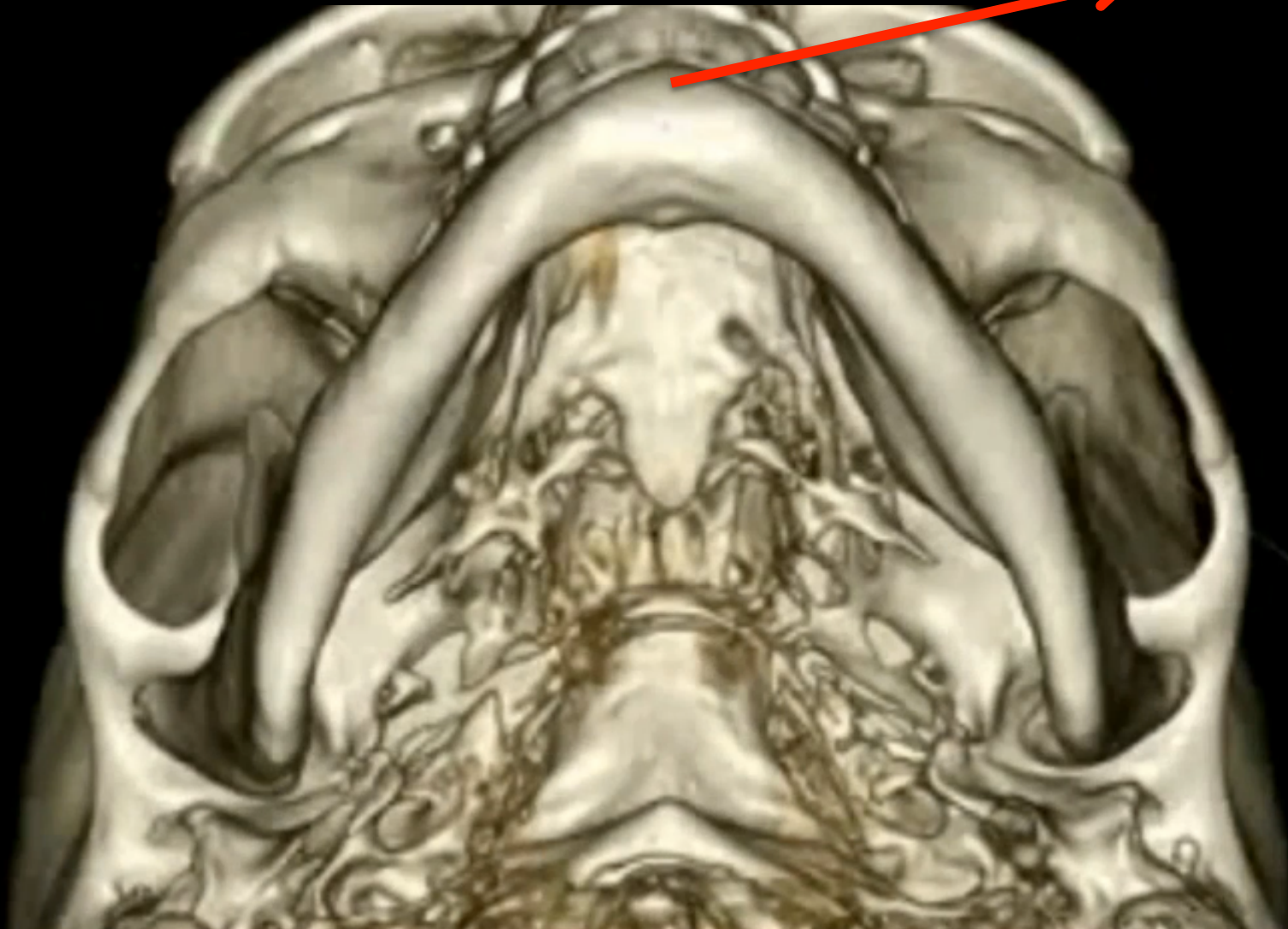
Mentón

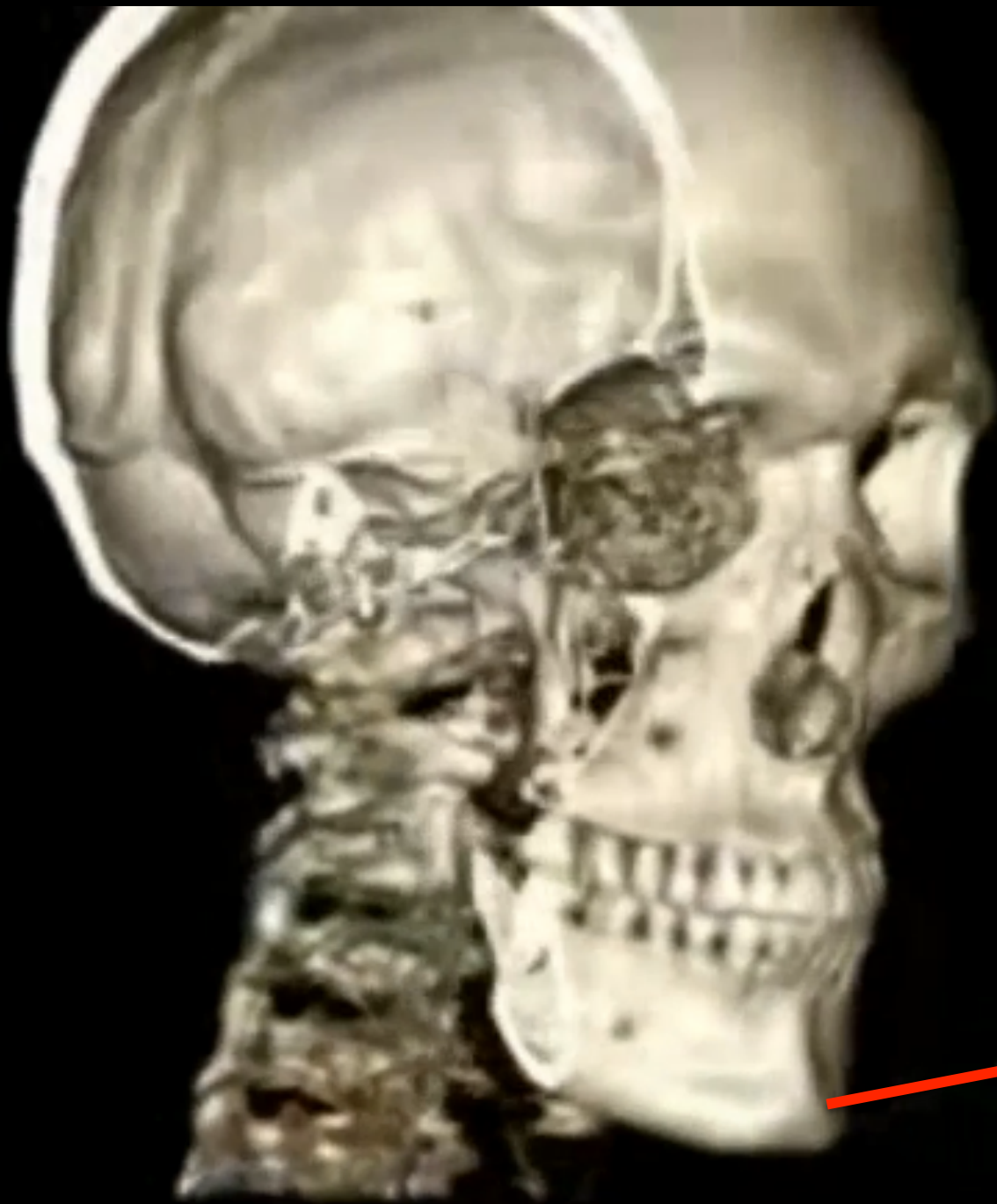


Mentón

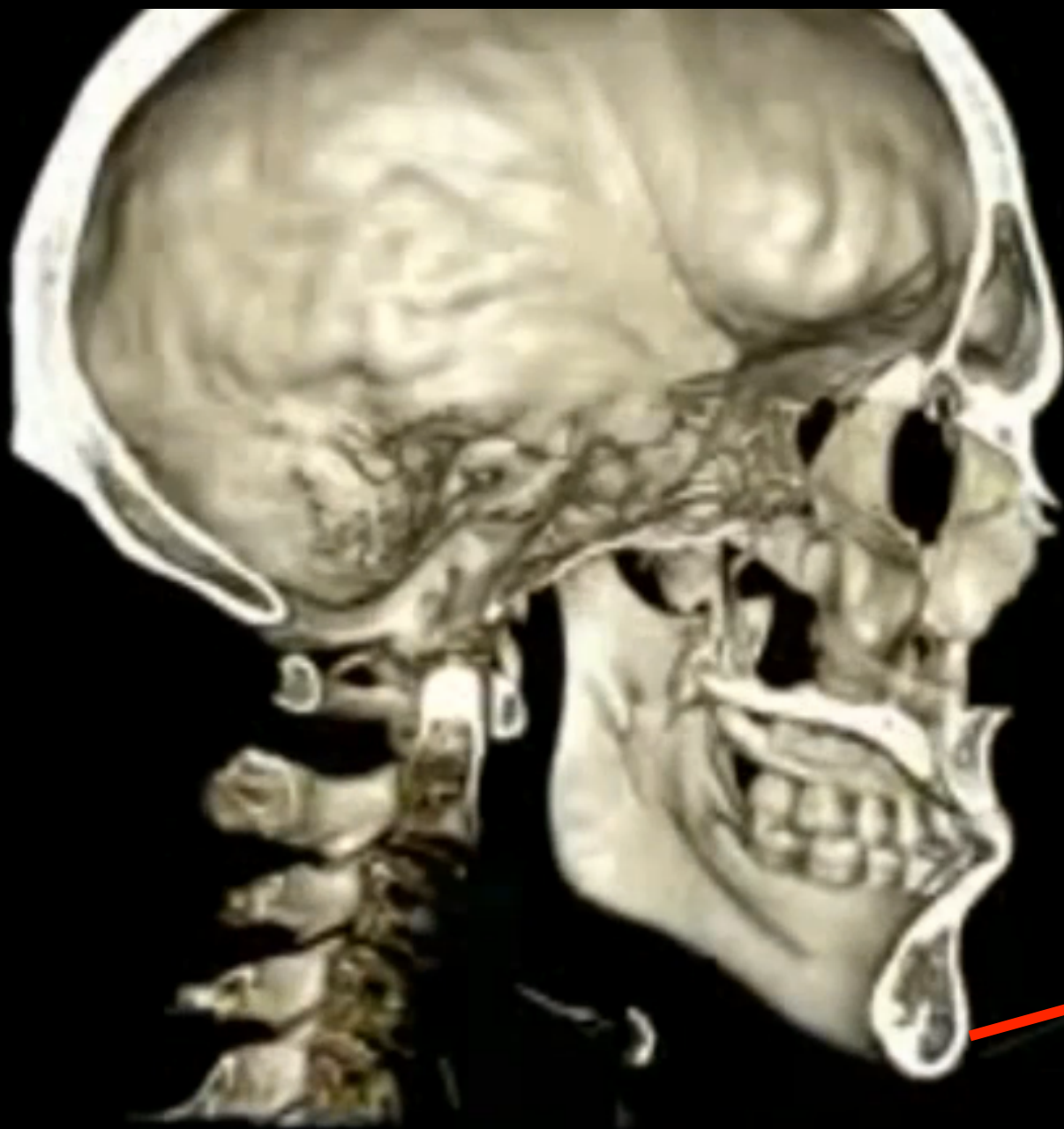


Mentón





Mentón



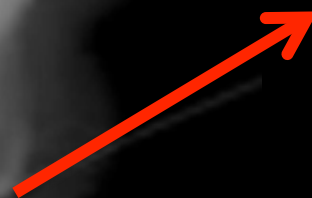
Mentón



Mentón

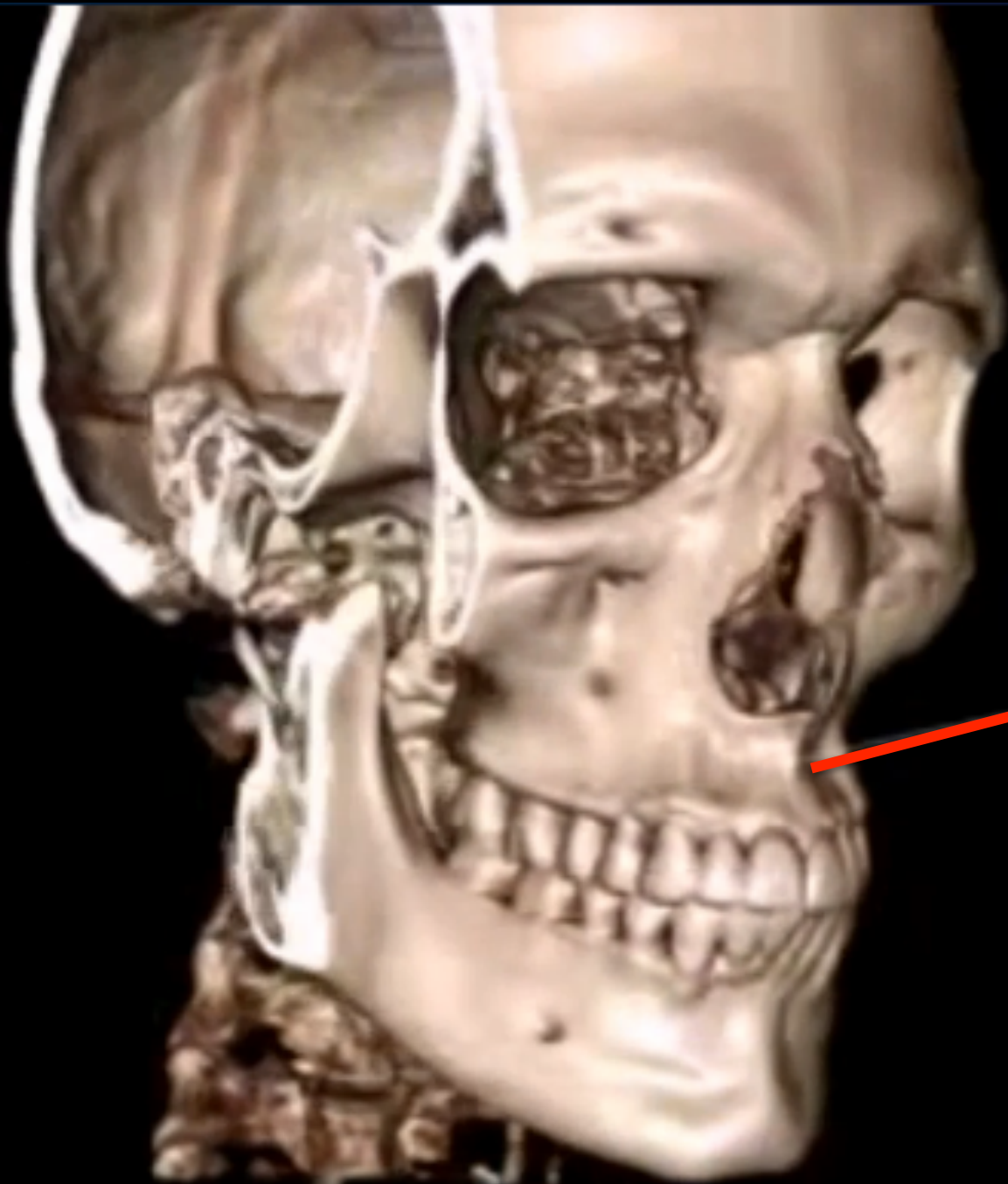


Mentón

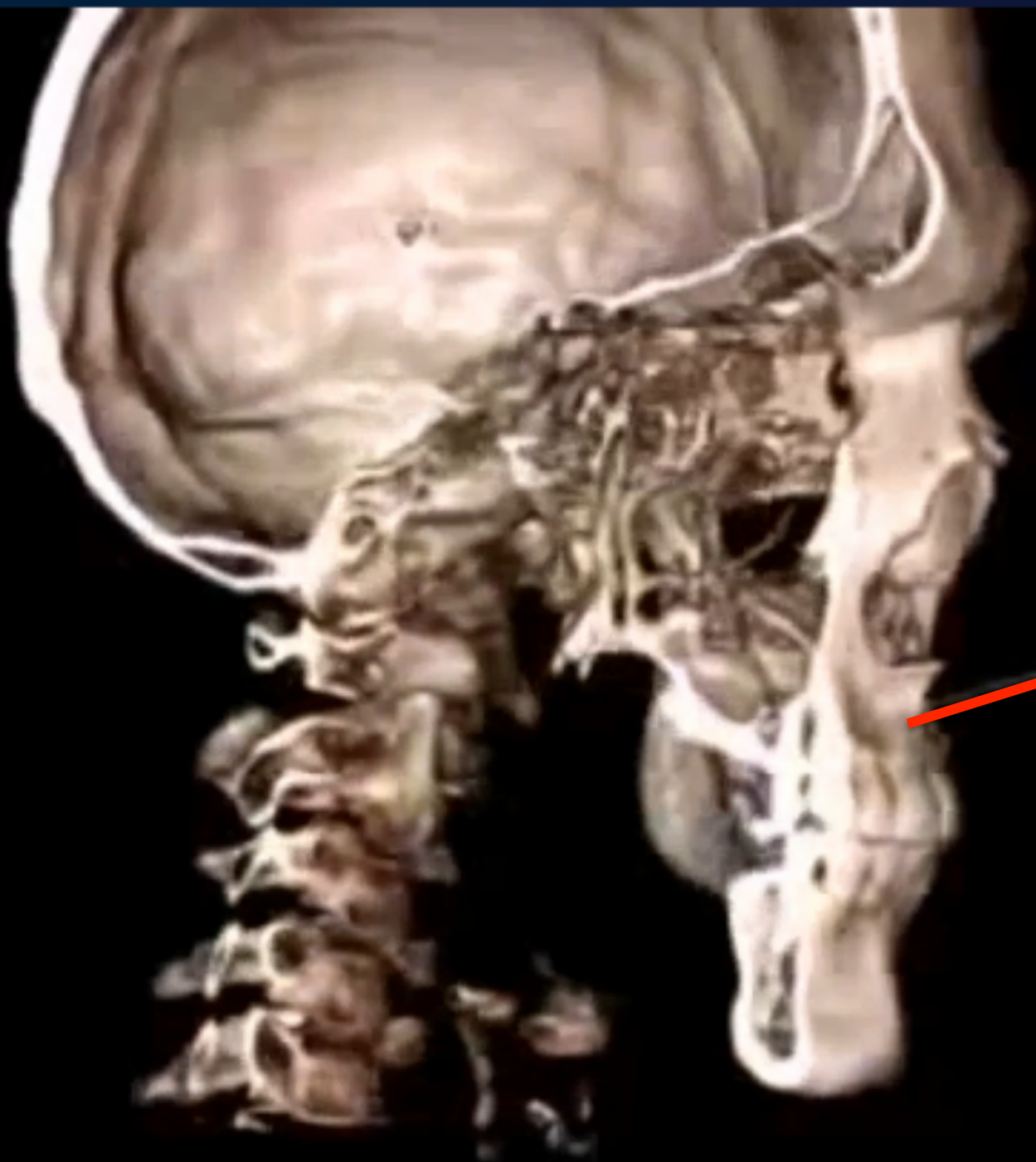




Punto A



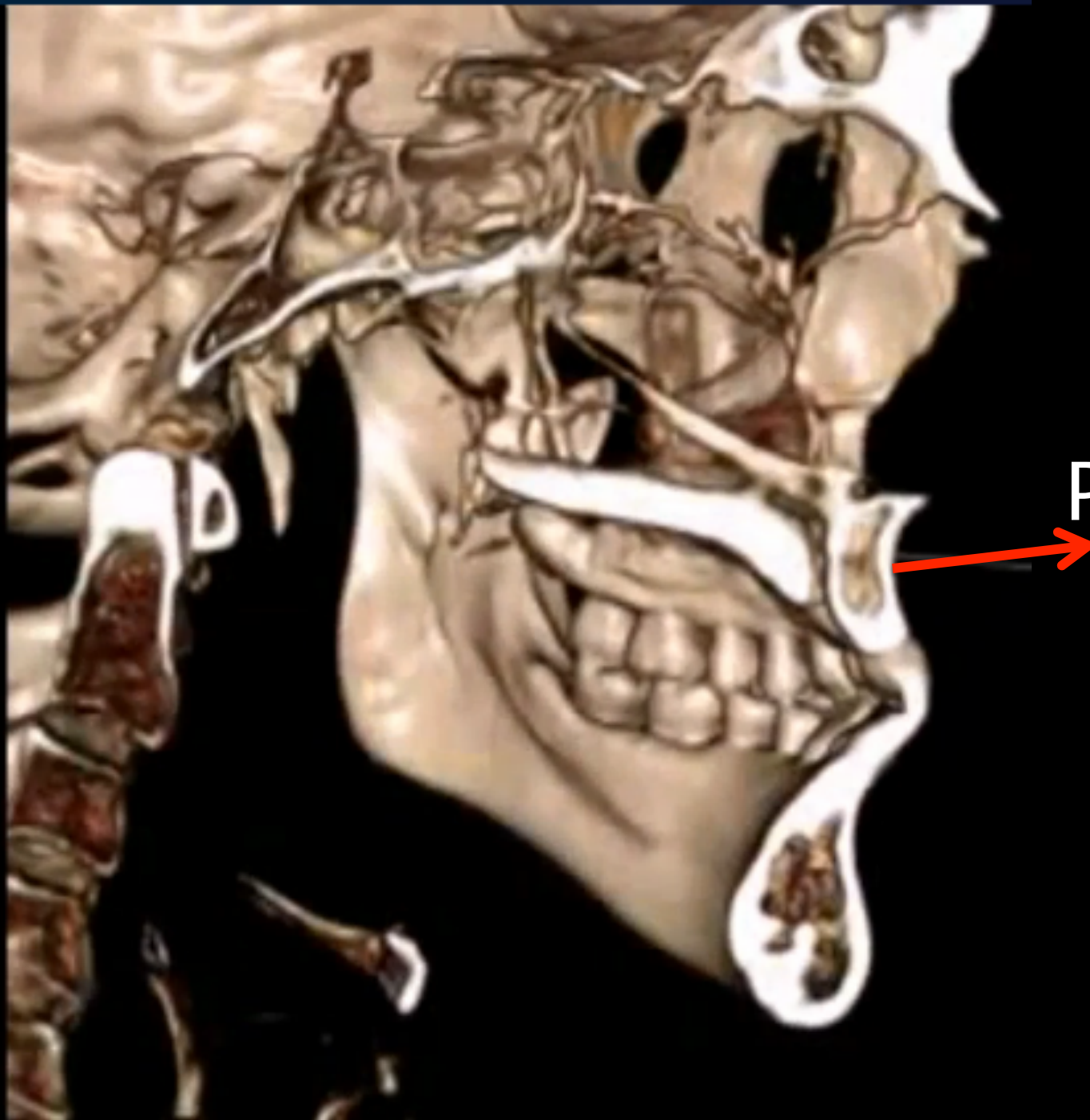
Punto A



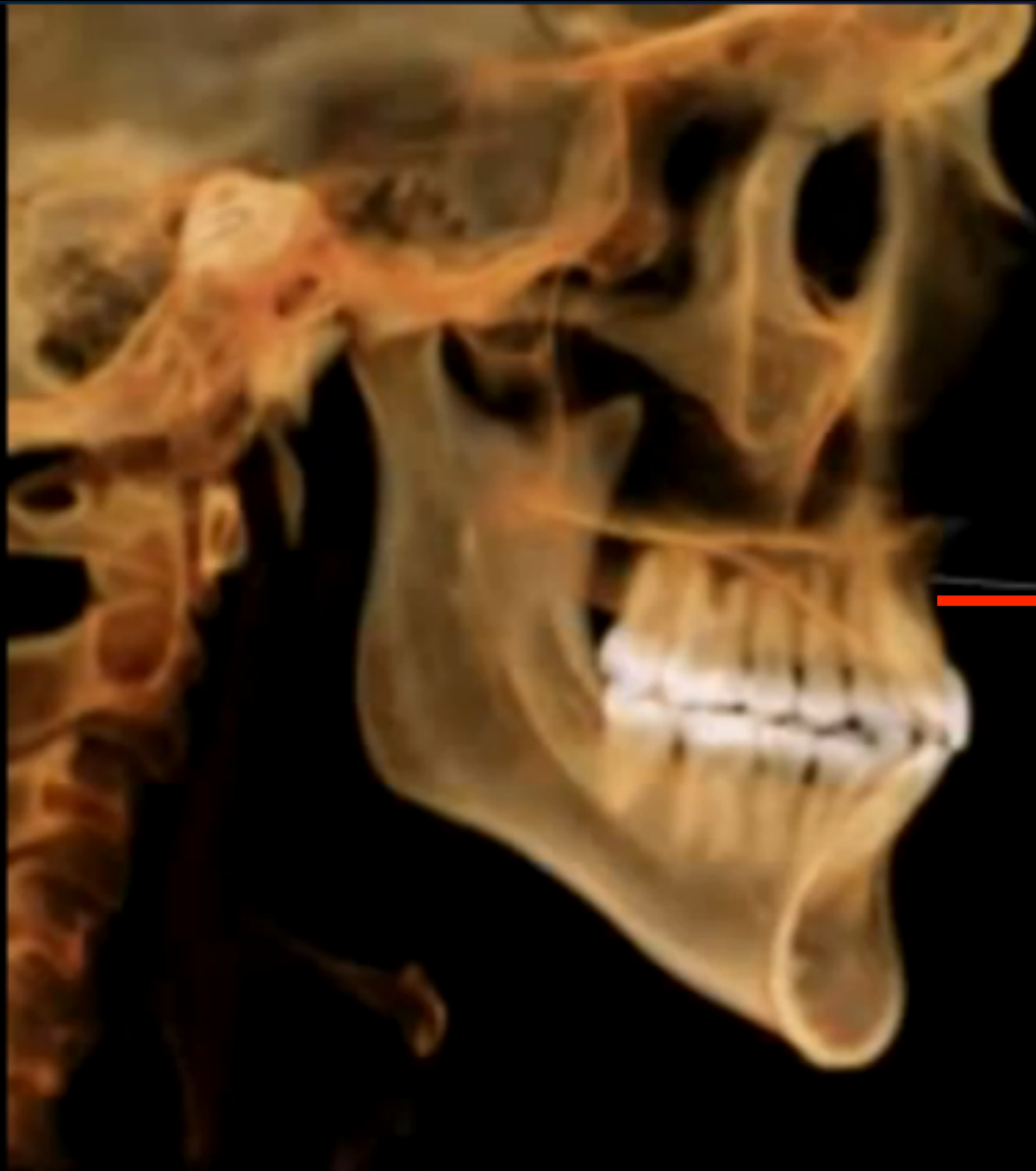
Punto A



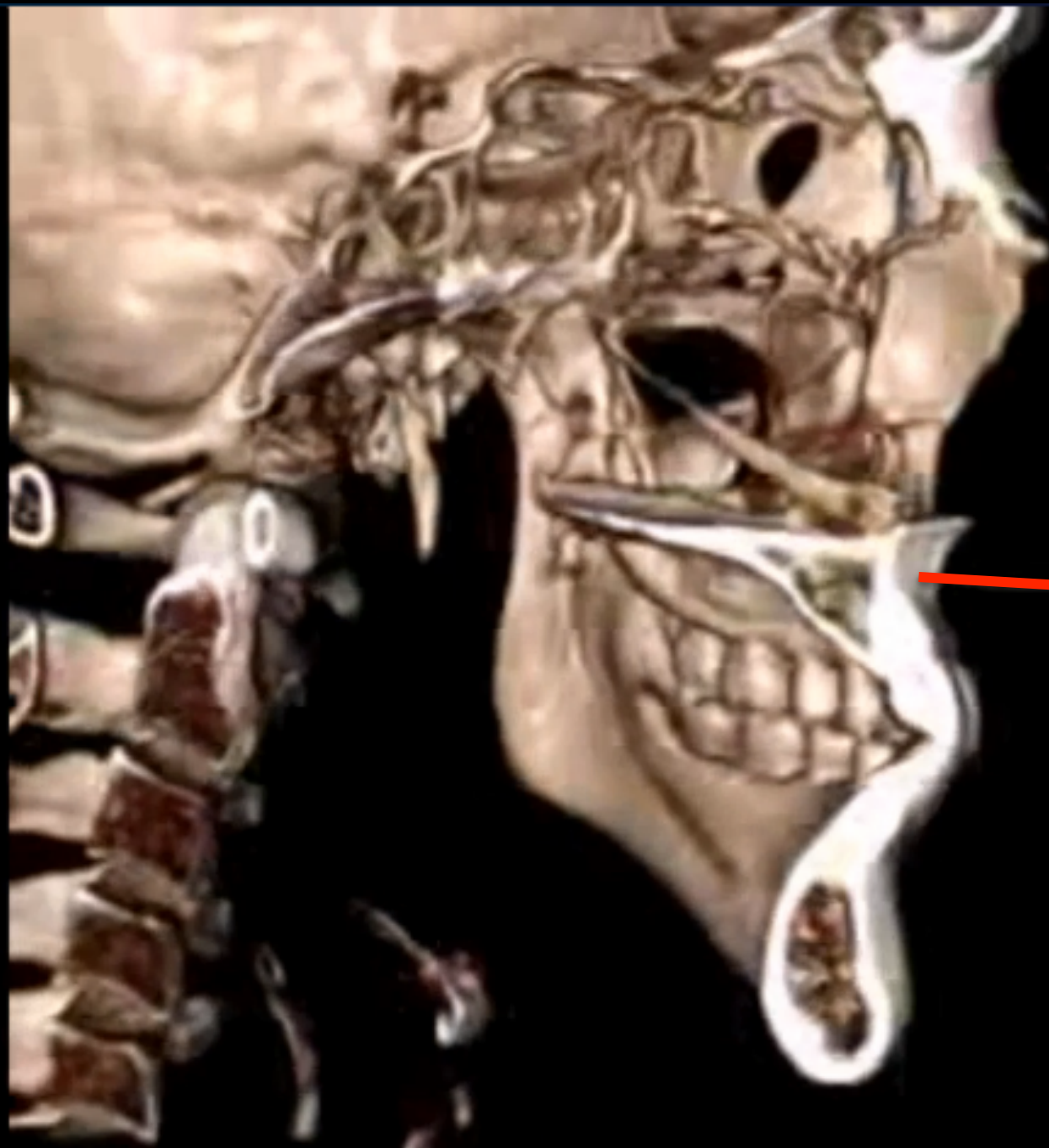
Punto A



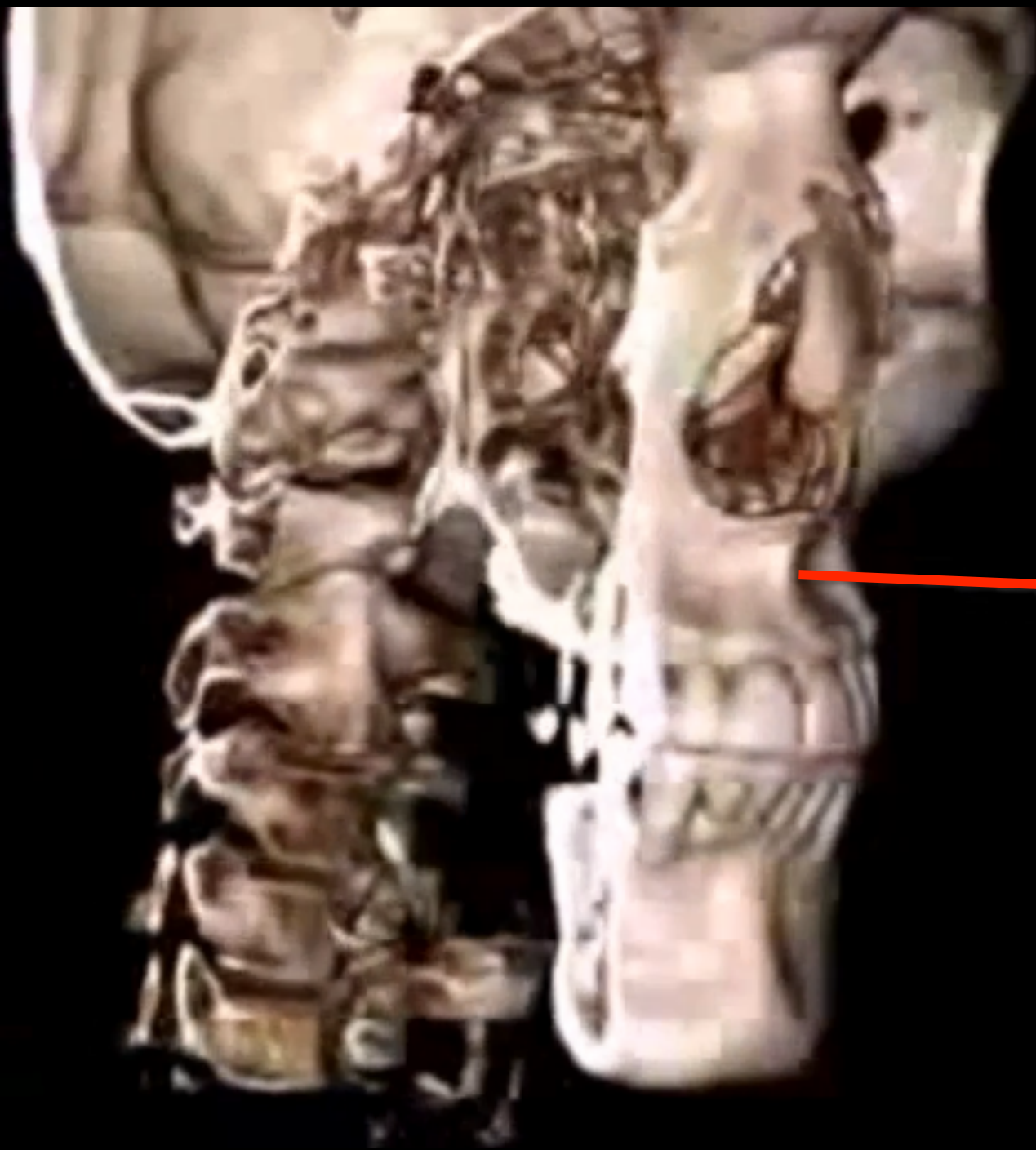
Punto A



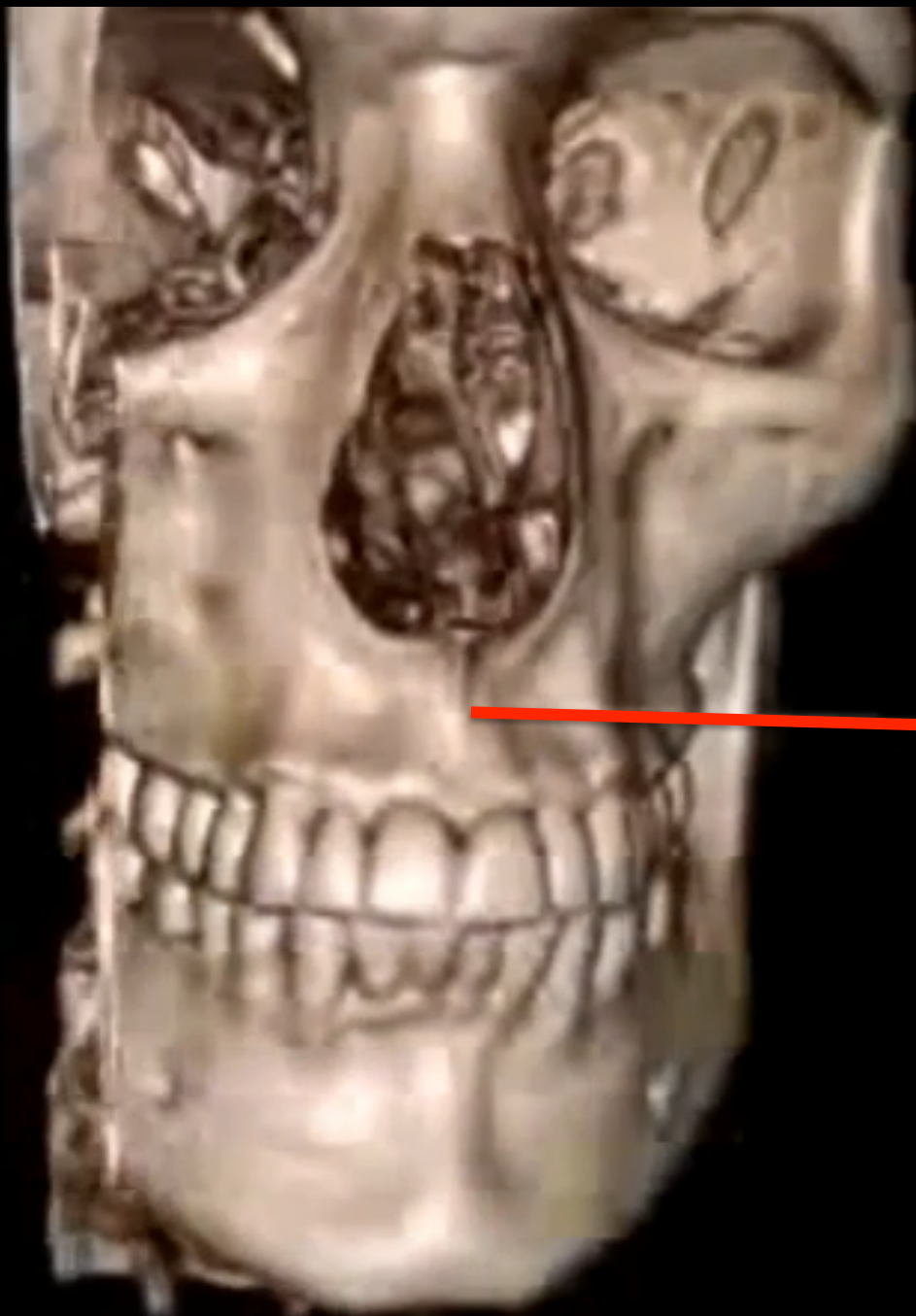
→ Punto A



→ Punto A



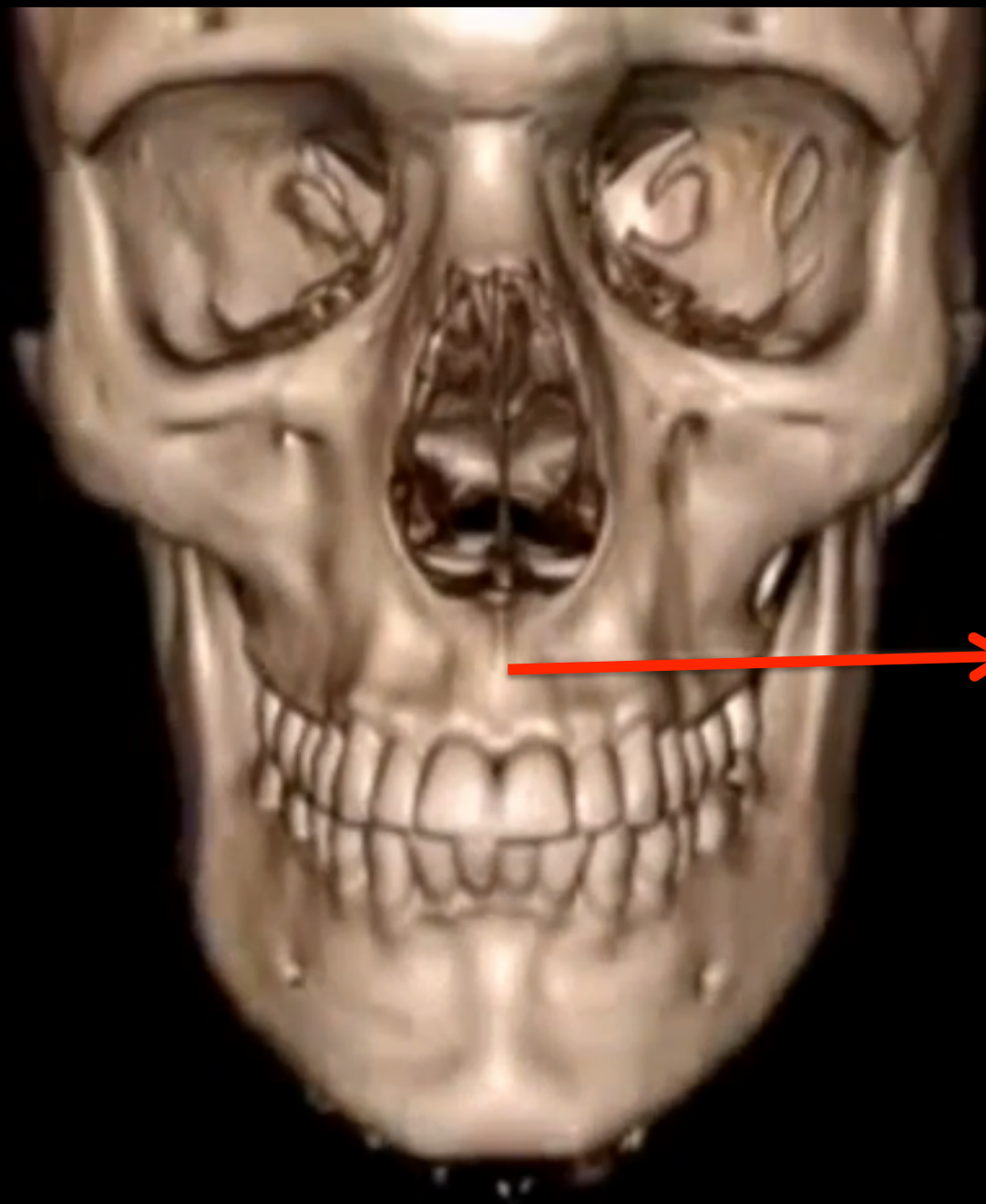
Punto A



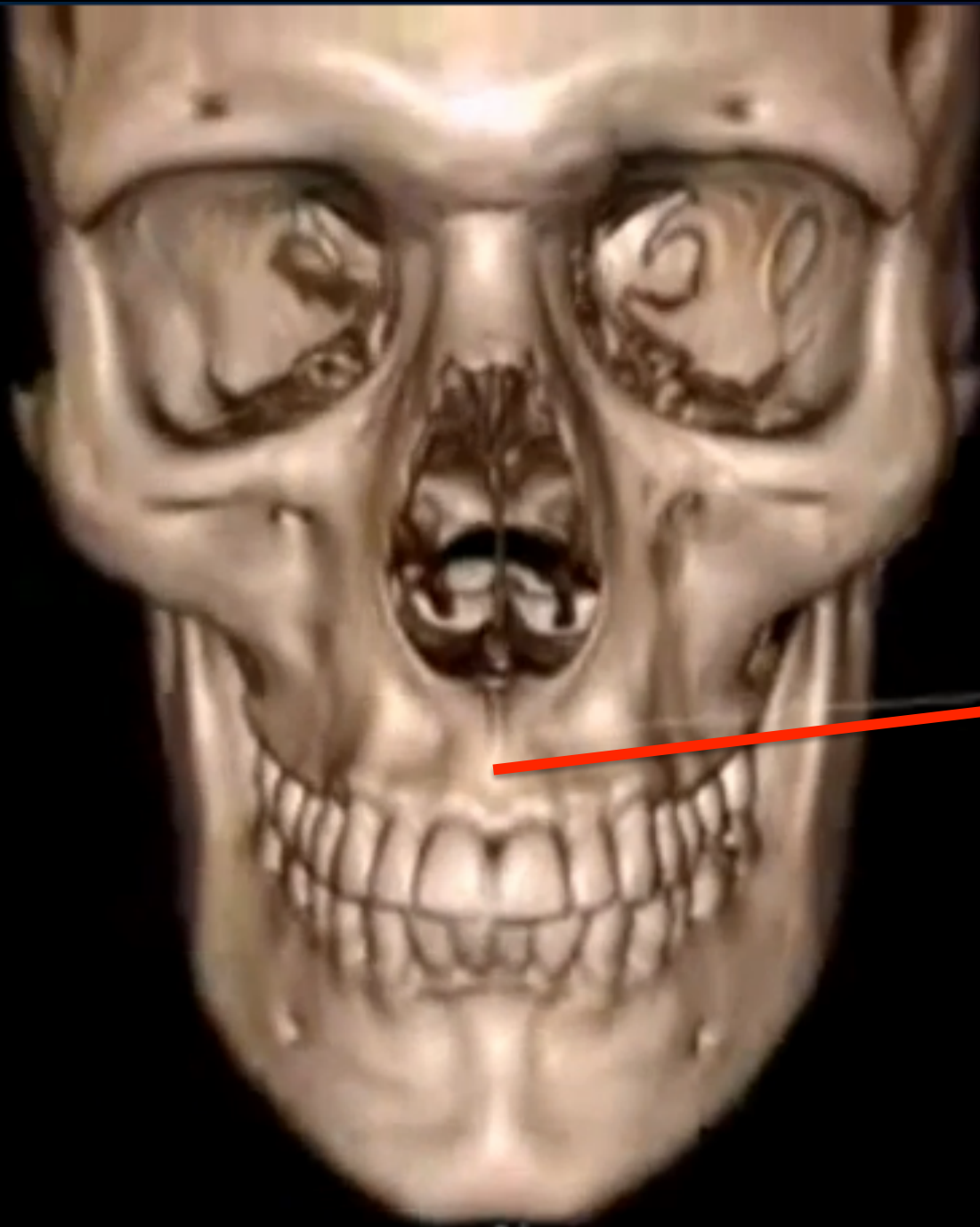
Punto A



Punto A



Punto A



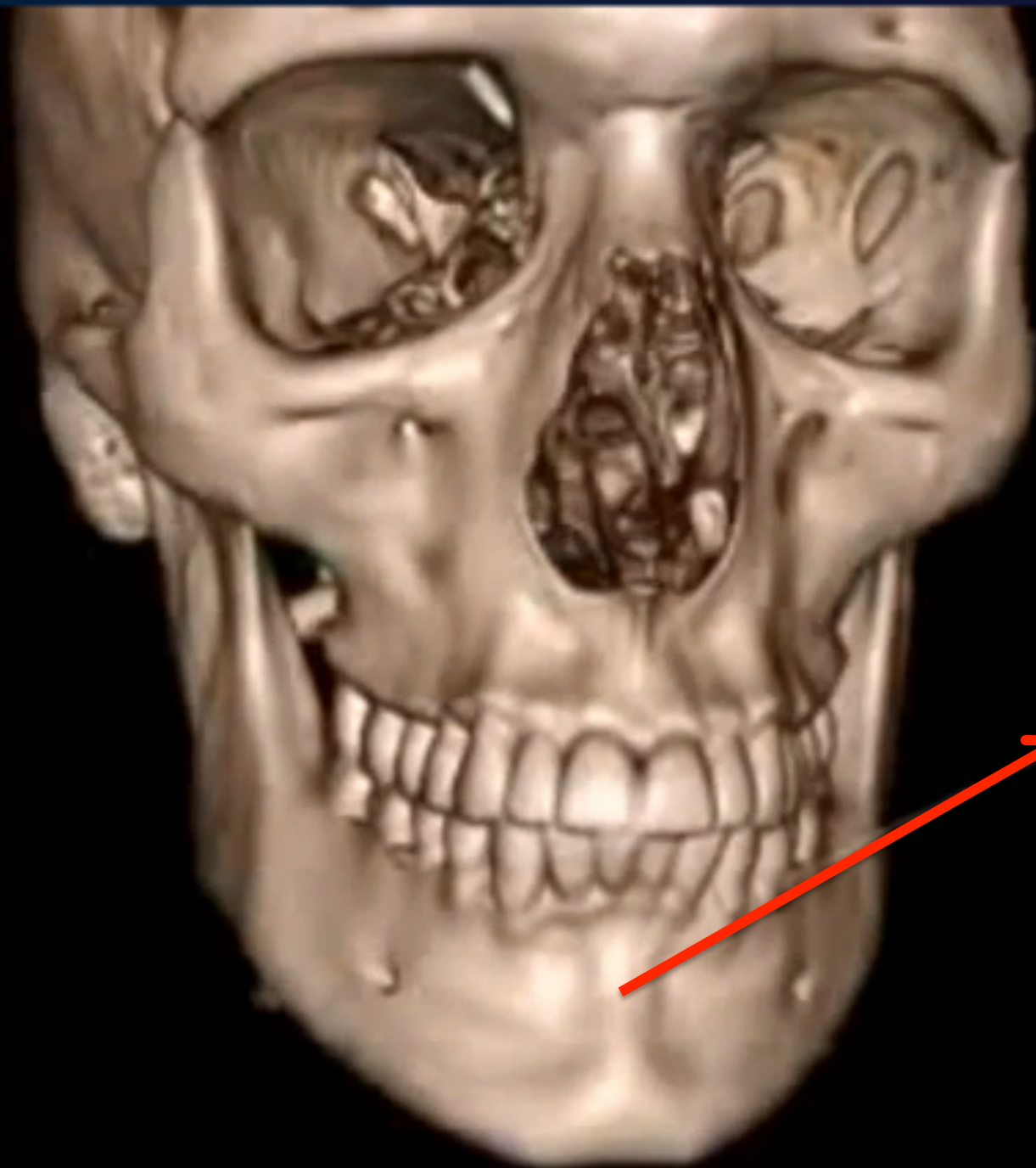
Punto A



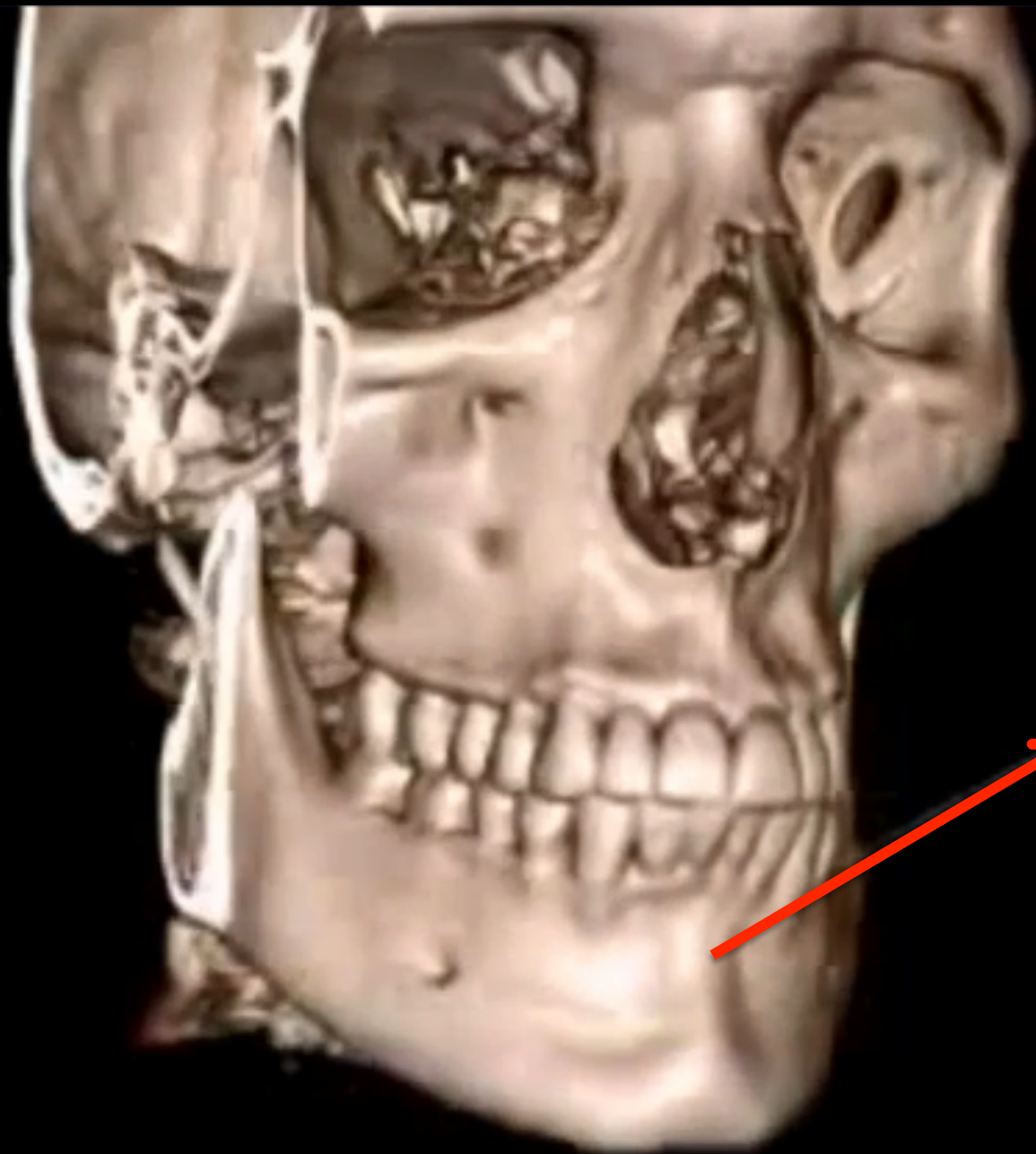
Punto B



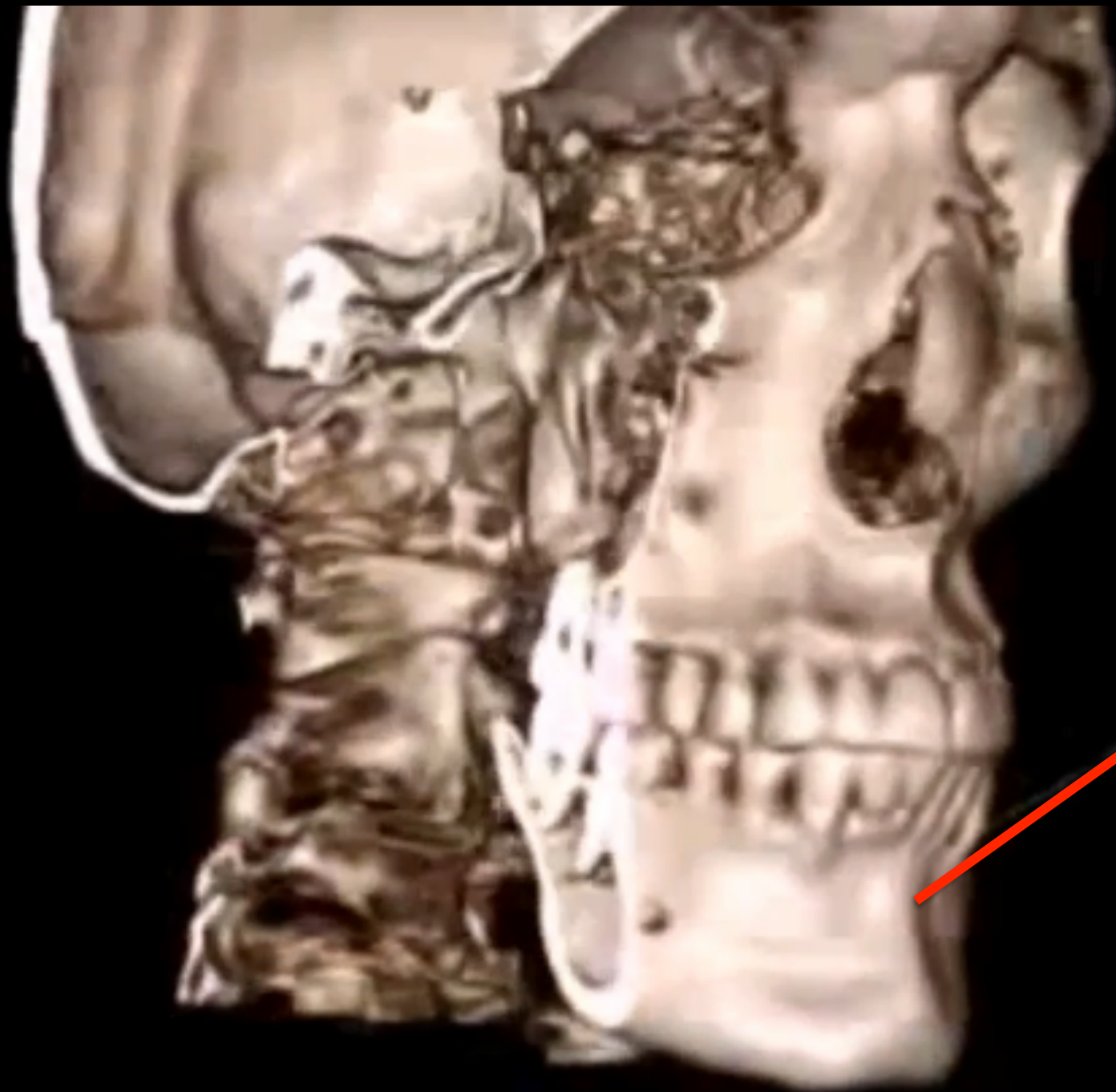
Punto B



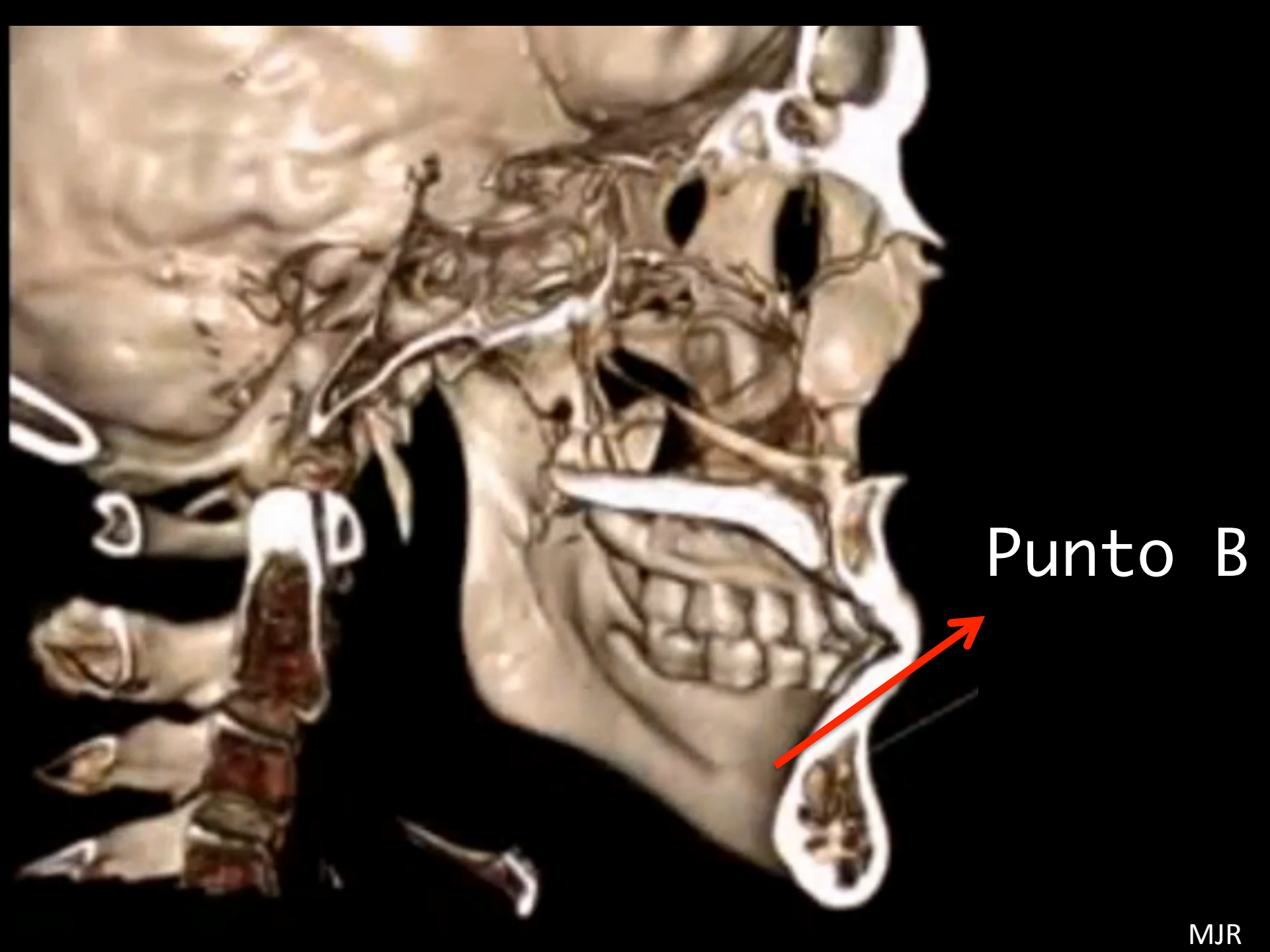
Punto B



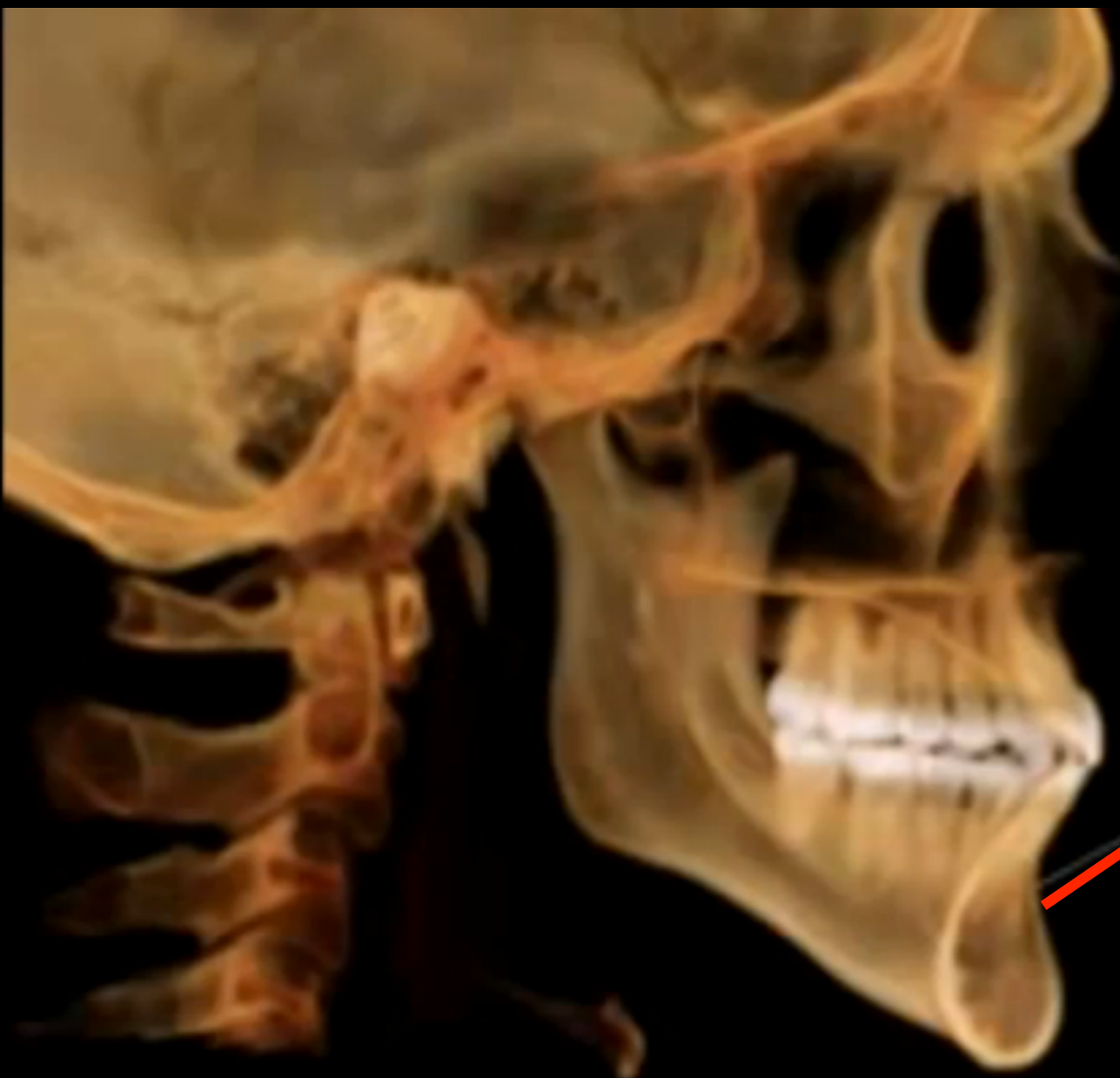
Punto B



Punto B



Punto B

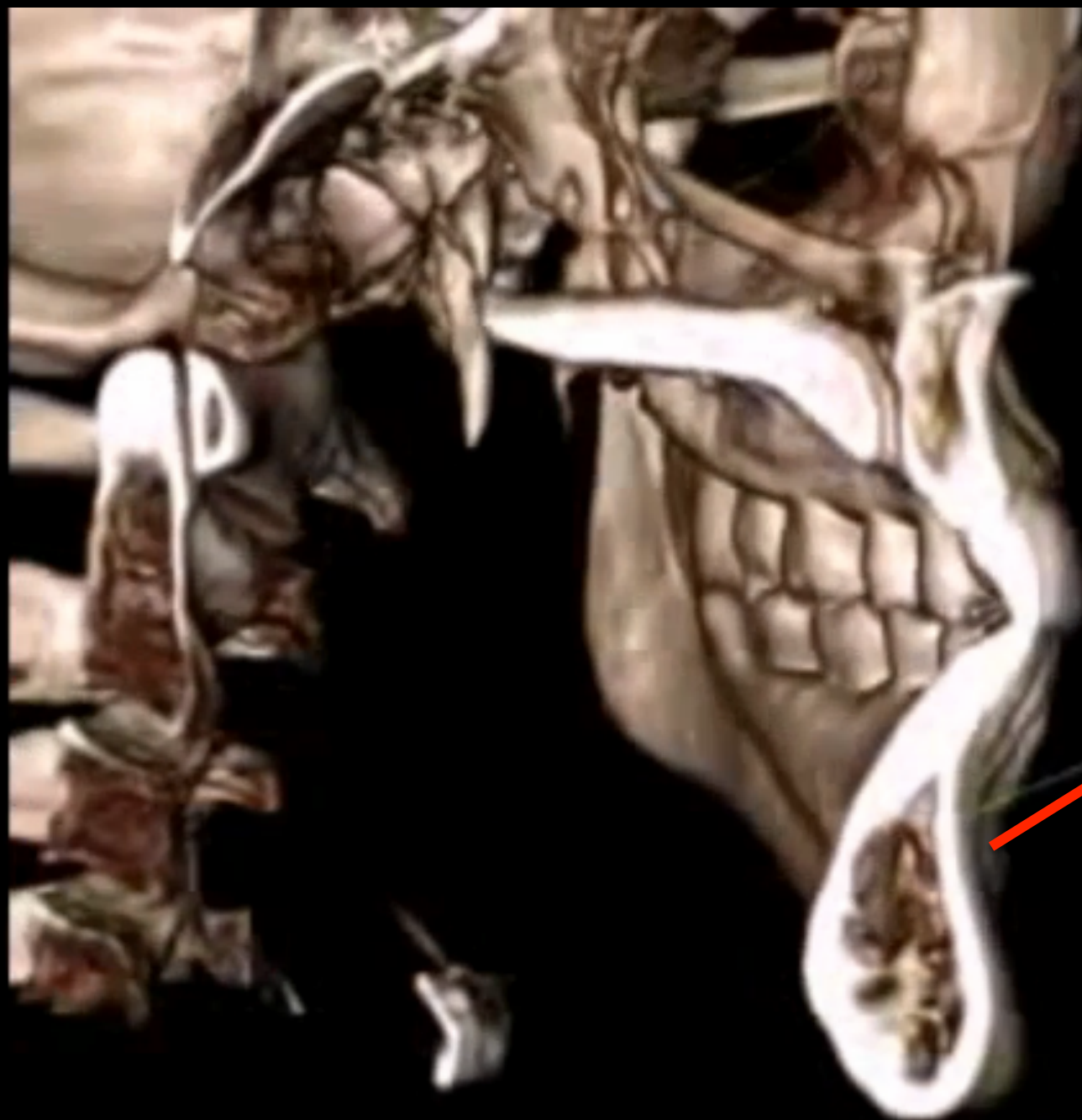


Punto B

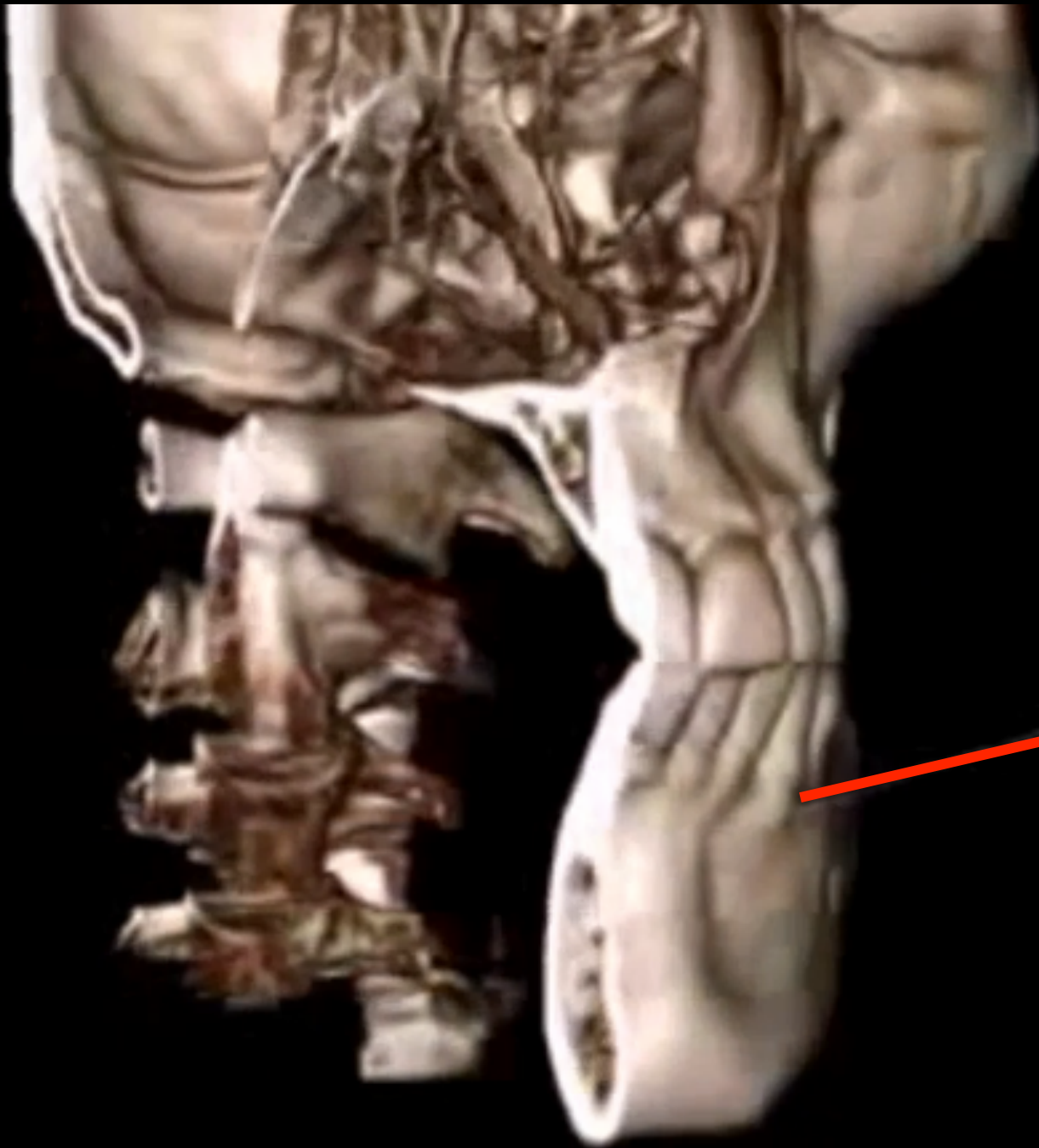




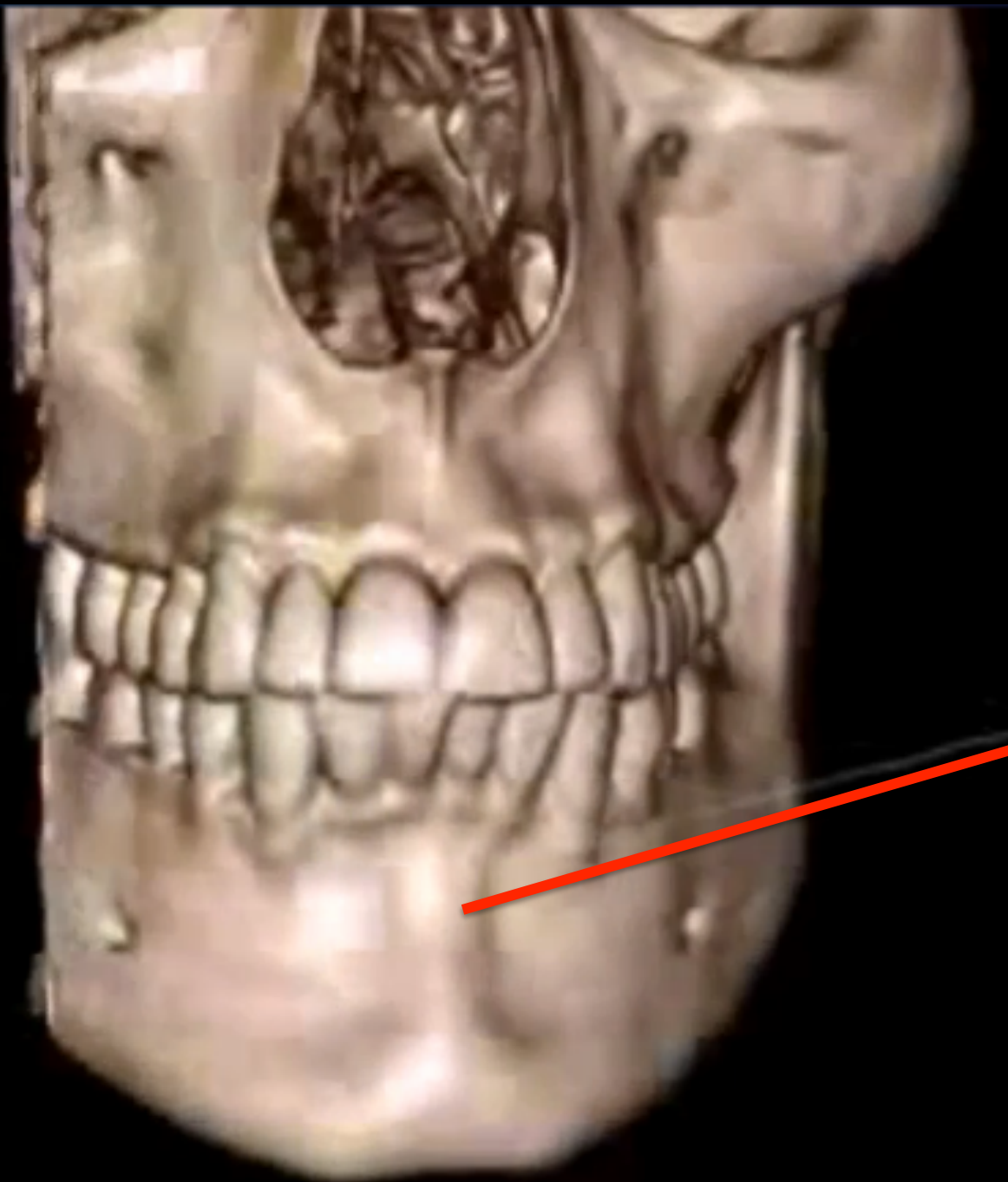
Punto B



Punto B



Punto B



Punto B

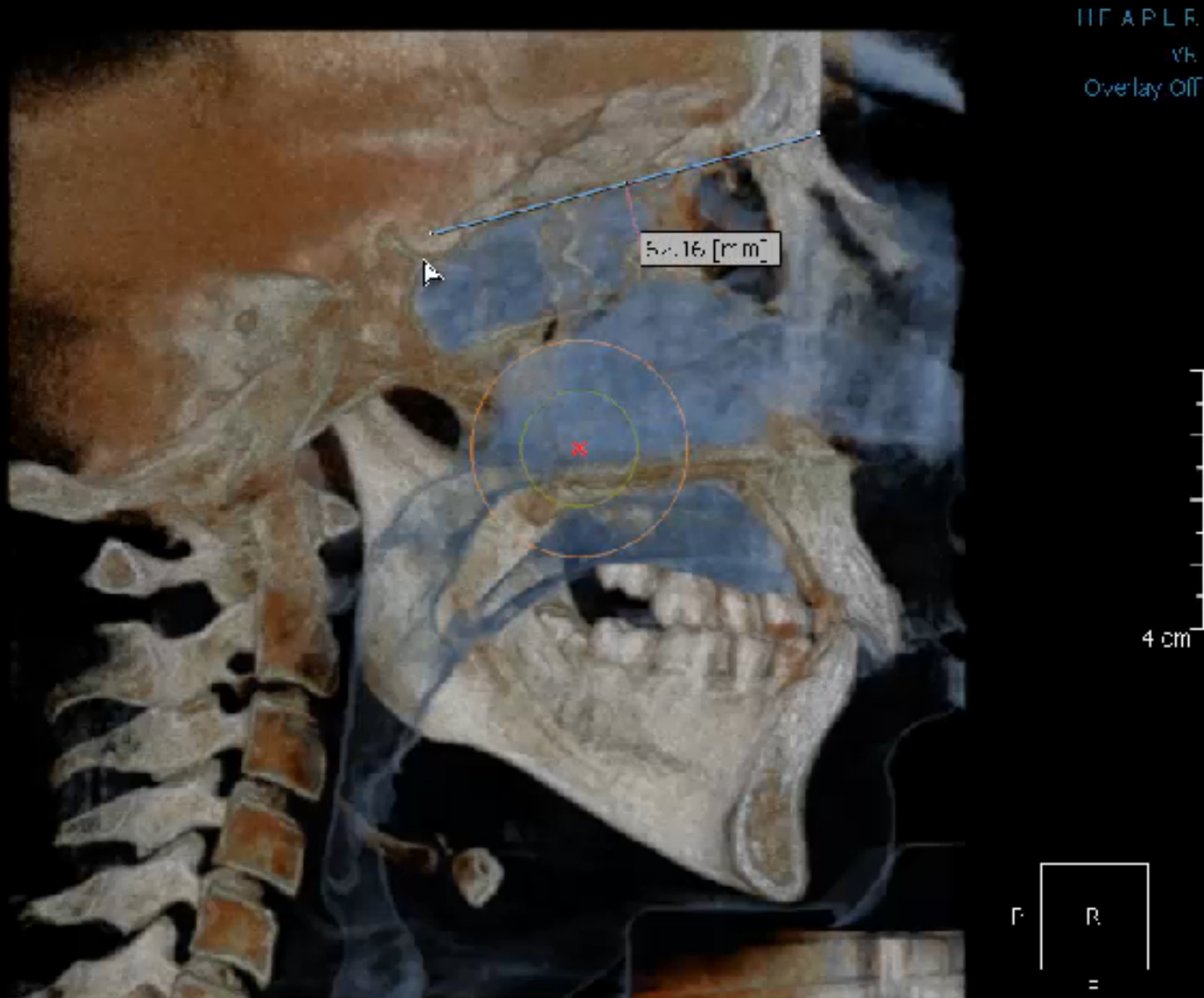


Punto B



Punto B

azado cefalometrico tridimensional





HF A P L R
VR
Overlay Off



4 cm





HF APL R

VR

Overlay Off



4 cm



MJR

HFAPLR

VR

Overlay Off



HF A P L R

VR

Overlay Off



4 cm

P

R

F

HF APL R

VR

Overlay Off





HF APL R
VR
Overlay Off



VR
Overlay Off

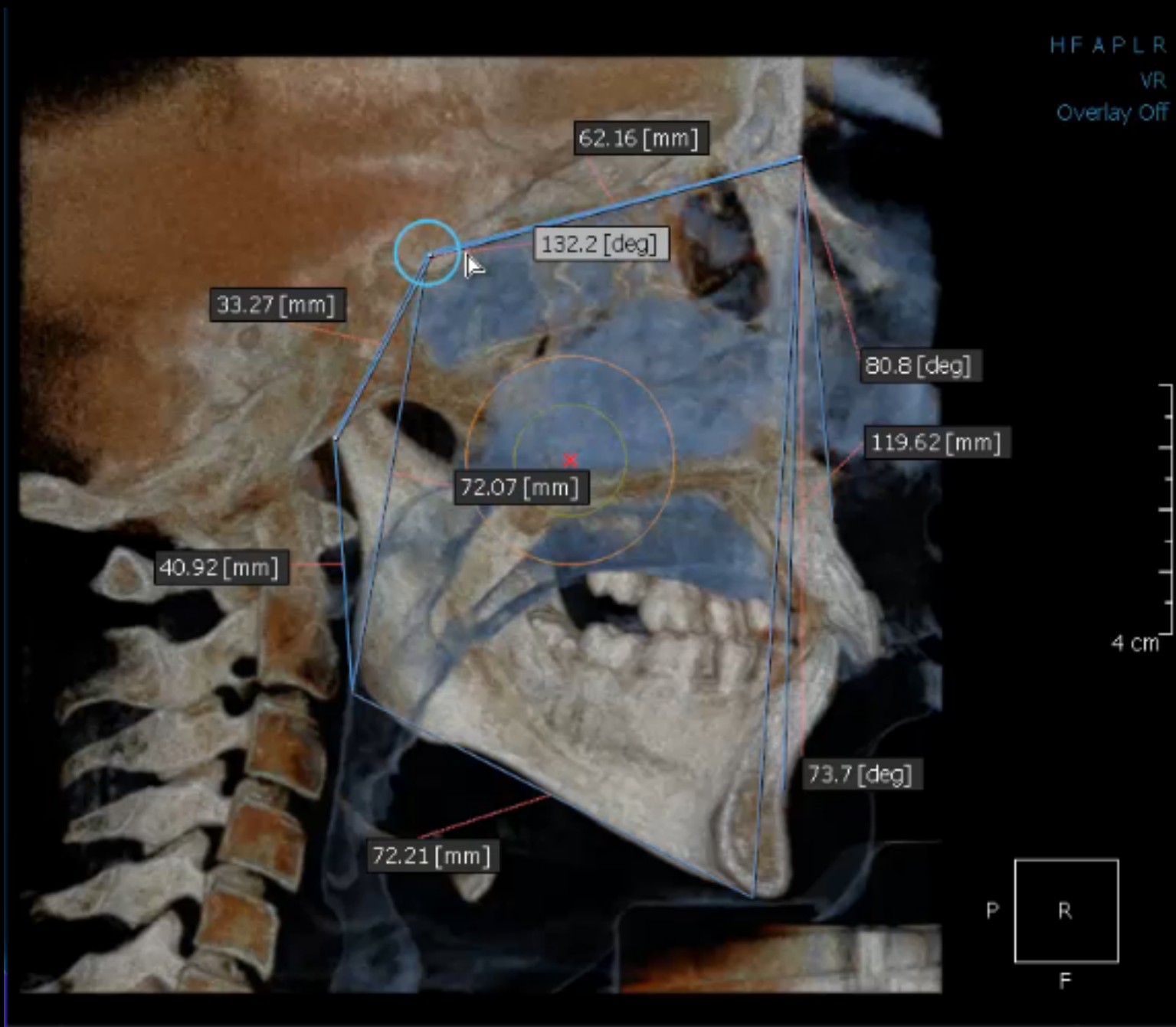






HF A P L R
VR
Overlay Off





HF A P L R
VR
Overlay Off



HF APL R

VR

Overlay Off



4 cm

P

R

F

HF A P L R

VR

Overlay Off



4 cm

P

R

F



Cefalometrías 2D y 3D

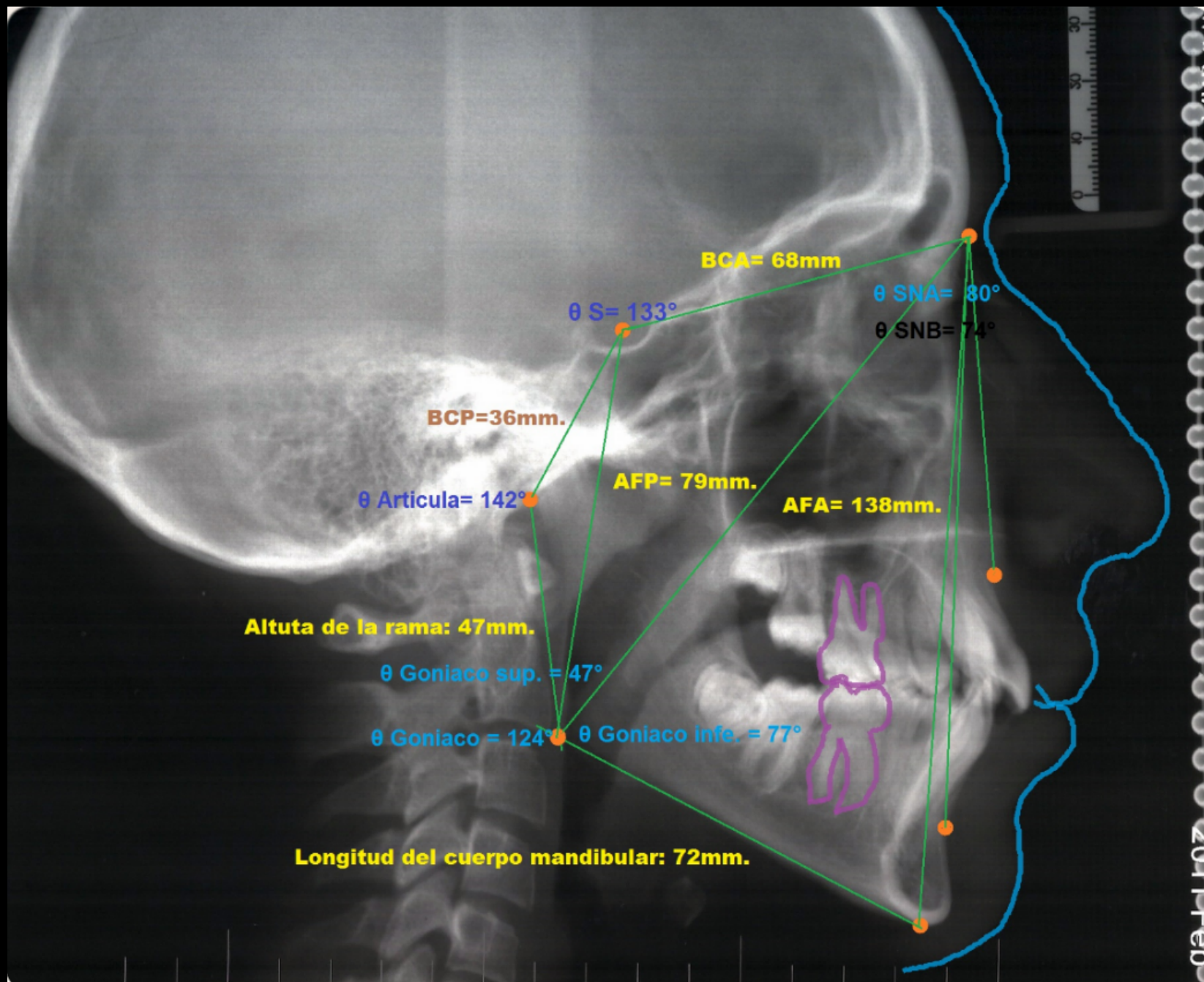


Tabla 1. ANÁLISIS CONVENCIONAL DE JARABACK.

	NORMA	PACIENTE
Base craneal anterior S-N	68 a 74 mm	68mm
Base craneal posterior S-Ar	29 a 35 mm	36mm
Altura de la rama Ar-Go	39 a 49 mm	47mm
Longitud del cuerpo mandibular Go-Me	66 a 76 mm	72mm
Ángulo de la silla, N-S-Ar	123° ± 5°	133°
Ángulo articular, S-Ar-Go	143° ± 6°	142°
Ángulo goniaco, Ar-Go-Me	130° ± 7°	124°
Suma total de ángulos	396° ± 6°	399°
Mitad superior ángulo goniaco, Ar-Go-N	52° a 55°	47°
Mitad inferior ángulo goniaco, N-Go-Me	70° a 75°	77°
Altura facial posterior S-Go	70 a 85 mm	79mm
Altura facial anterior N-Me	105 a 120 mm	138mm
Altura facial posterior/anterior S-Go/N-Me	62 a 65 %	57.2 %
Ángulo S-N-A	82° ± 2°	80°
Ángulo S-N-B	80° ± 2°	73°



Overlay (

4 c

P

R

Tabla 2. ANÁLISIS TRIDIMENSIONAL DE JARABACK

	NORMA	PACIENTE
Base craneal anterior S-N	68 a 74 mm	62.16mm
Base craneal posterior S-Ar	29 a 35 mm	33.24mm
Altura de la rama Ar-Go	39 a 49 mm	40.92mm
Longitud del cuerpo mandibular Go-Me	66 a 76 mm	72.21mm
Ángulo de la silla, N-S-Ar	123° ± 5°	131.9°
Ángulo articular, S-Ar-Go	143° ± 6°	148.7°
Ángulo goniaco, Ar-Go-Me	130° ± 7°	120.9°
Suma total de ángulos	396° ± 6°	401.5°
Mitad superior ángulo goniaco, Ar-Go-N	52° a 55°	43.7°
Mitad inferior ángulo goniaco, N-Go-Me	70° a 75°	76.8°
Altura facial posterior S-Go	70 a 85 mm	72.07mm
Altura facial anterior N-Me	105 a 120 mm	119.62mm
Altura facial posterior/anterior S-Go/N-Me	62 a 65 %	60.24 %
Ángulo S-N-A	82° ± 2°	80.8°
Ángulo S-N-B	80° ± 2°	73.7°

Software para cefalometría 3D

Dolphin 3D



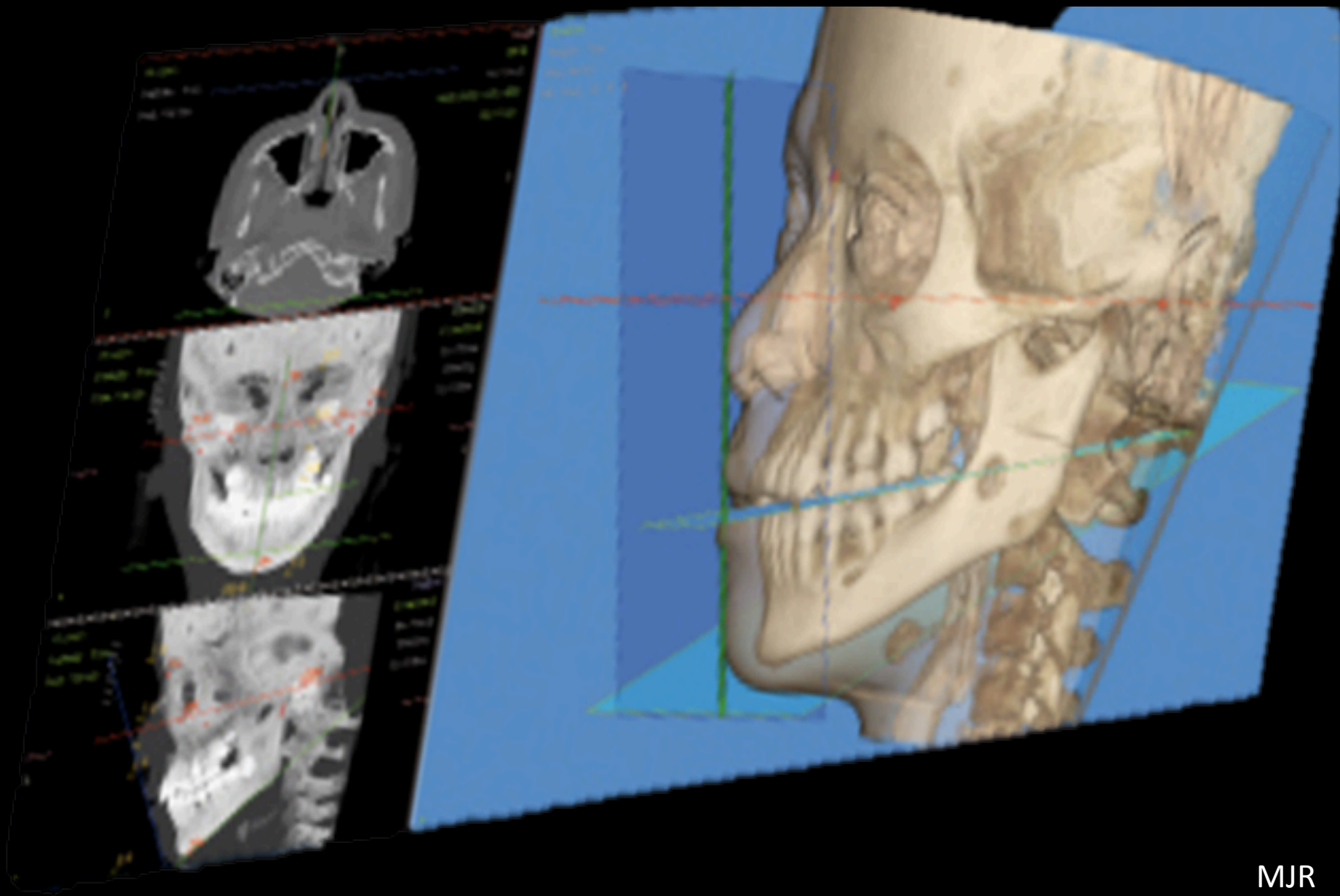
Dolphin

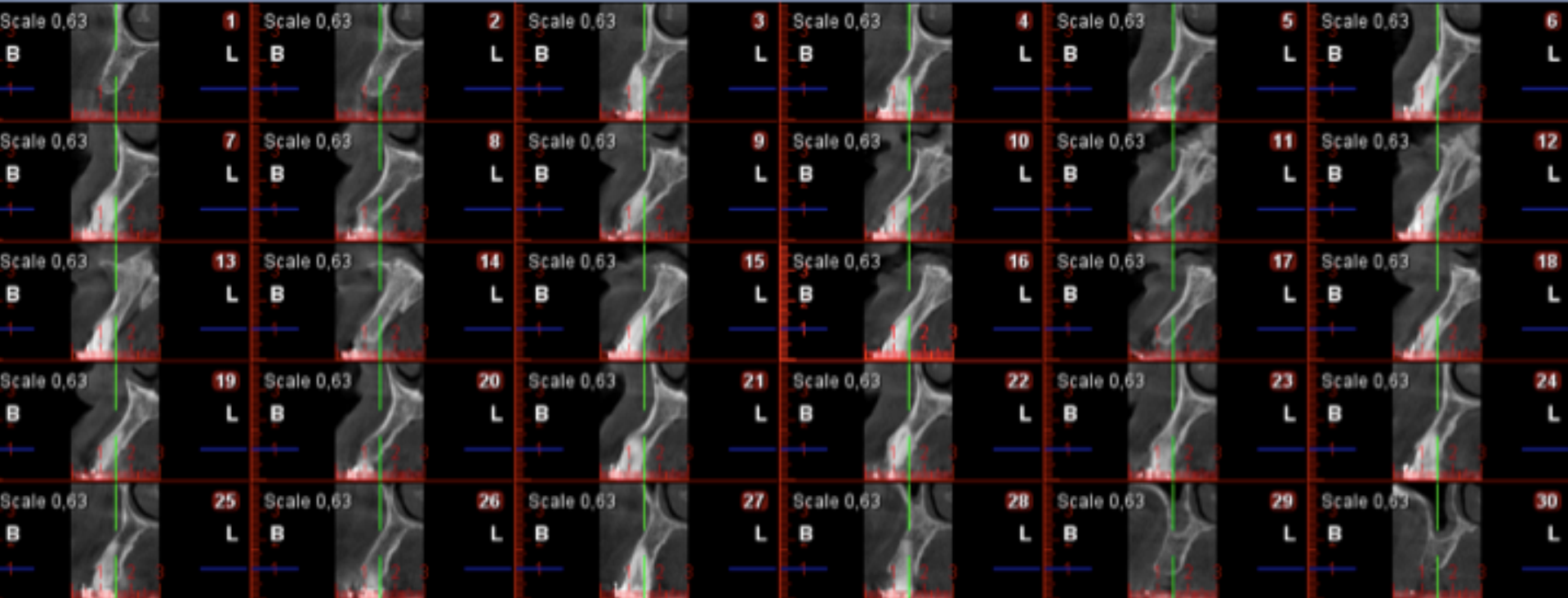
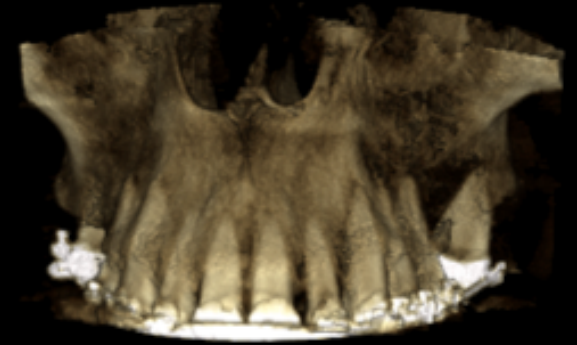
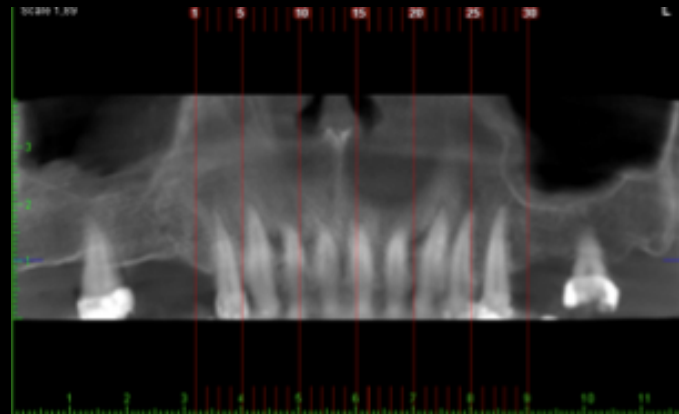
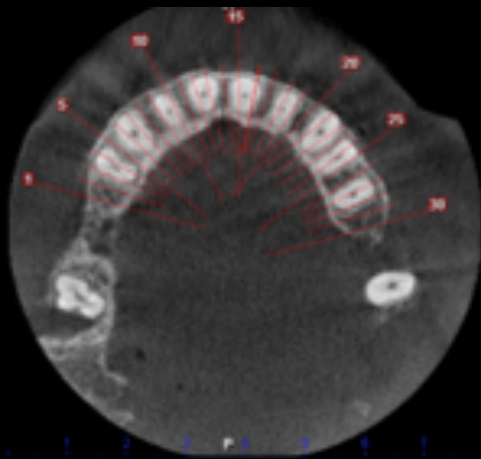


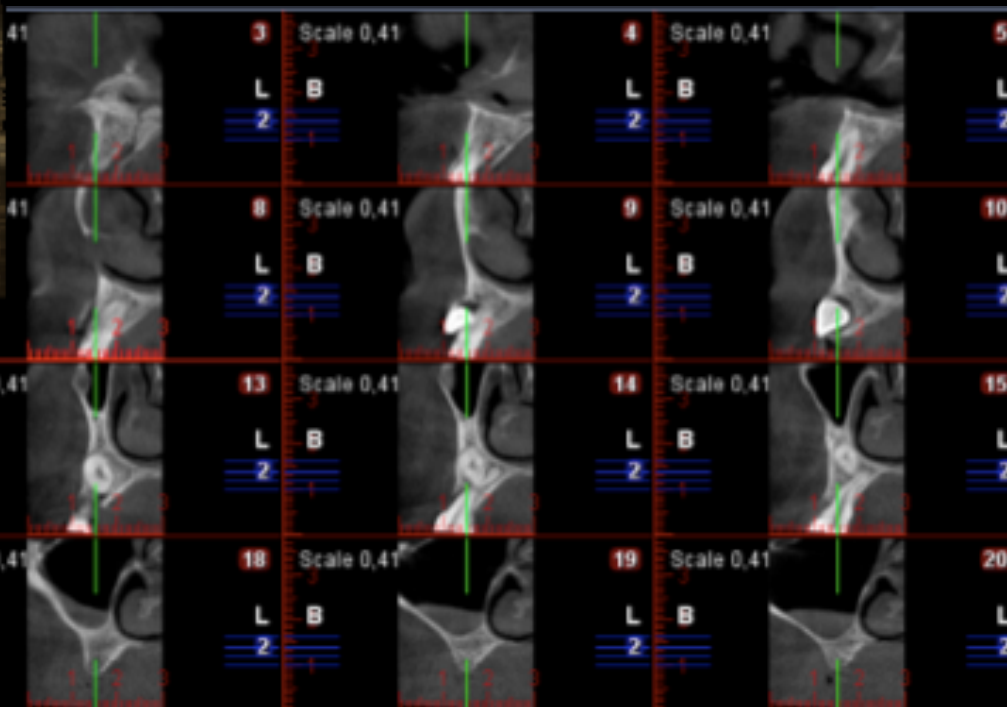
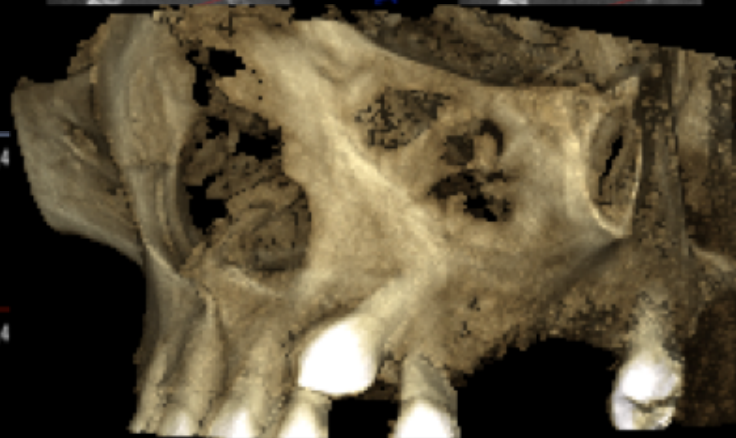
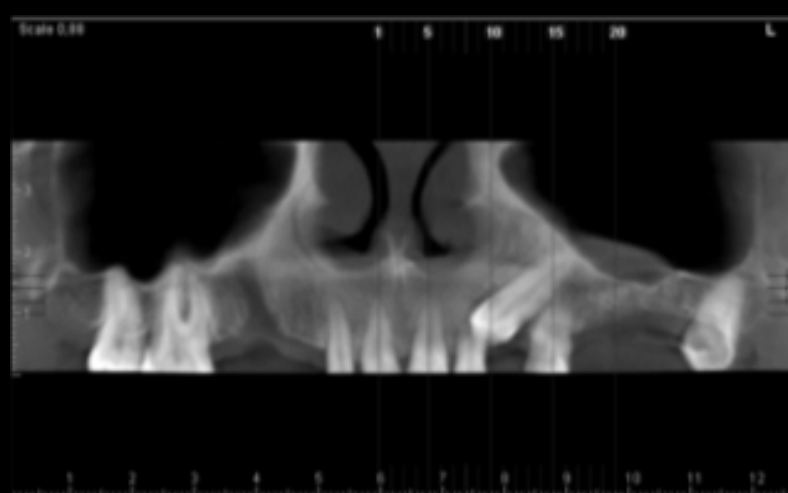
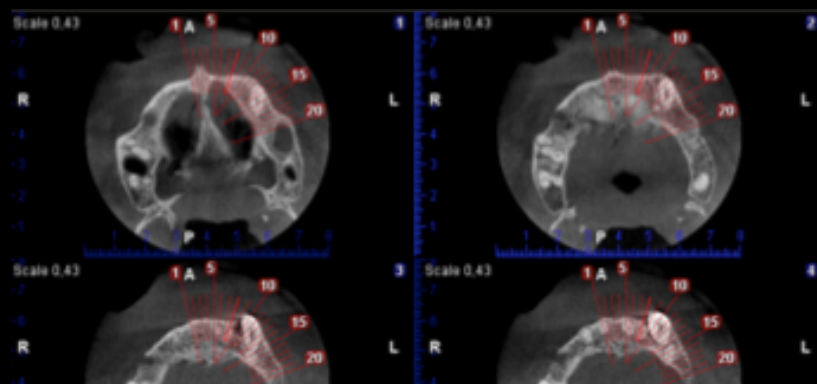
Permite segmentar el modelo 3D en diferentes niveles de intensidad (Tejidos blandos o duros)

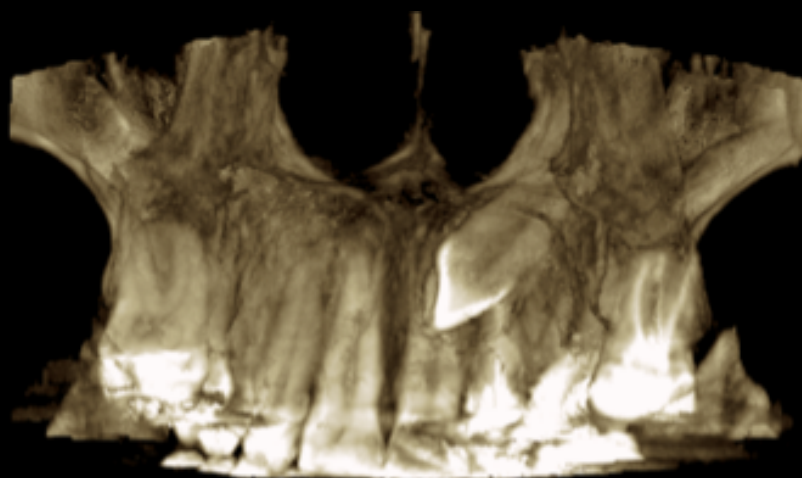
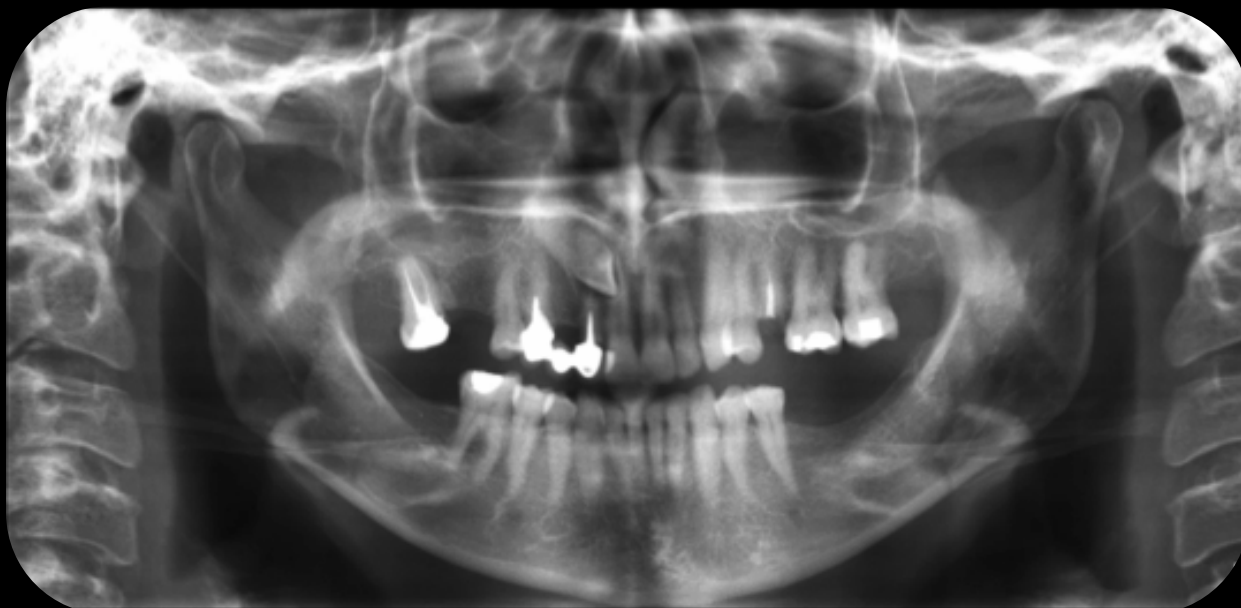


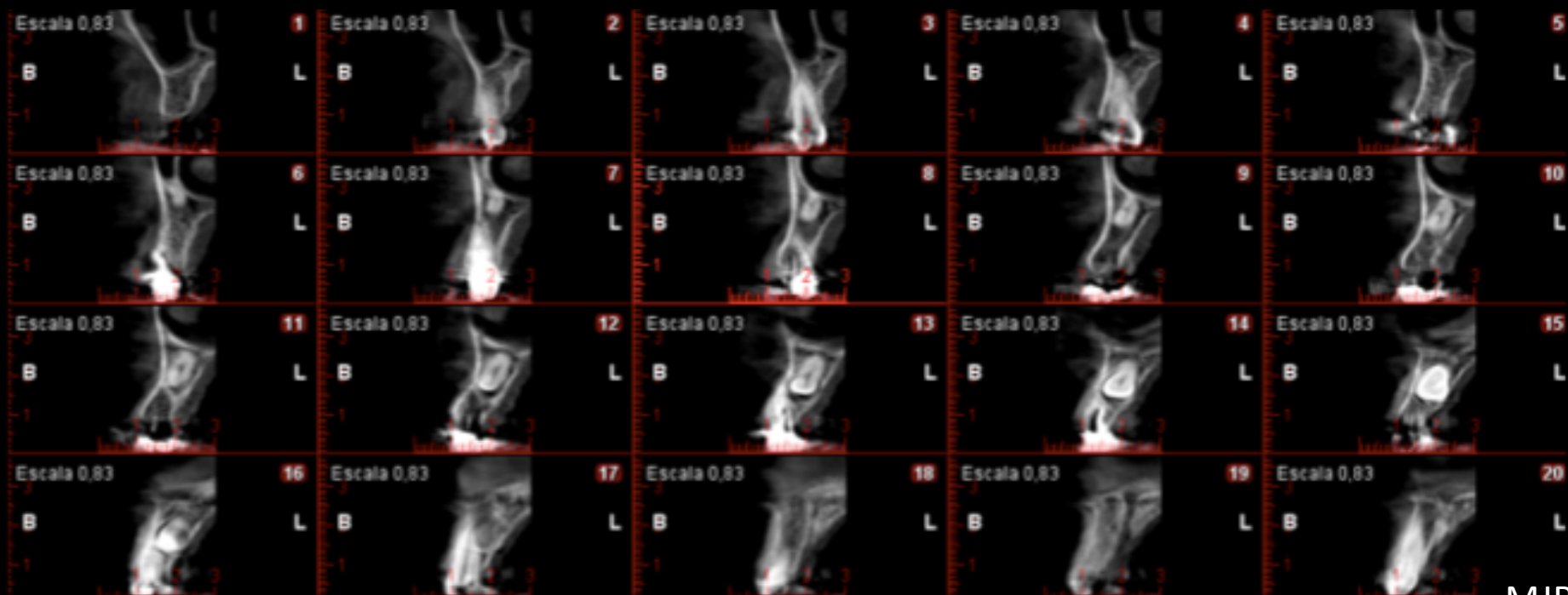
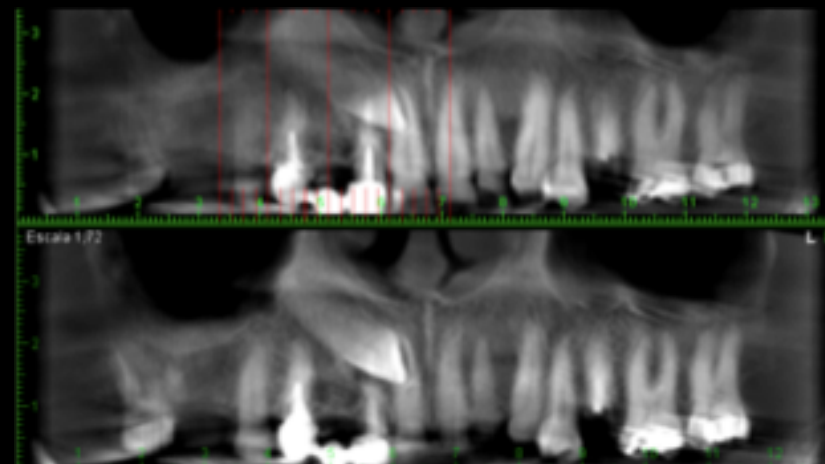
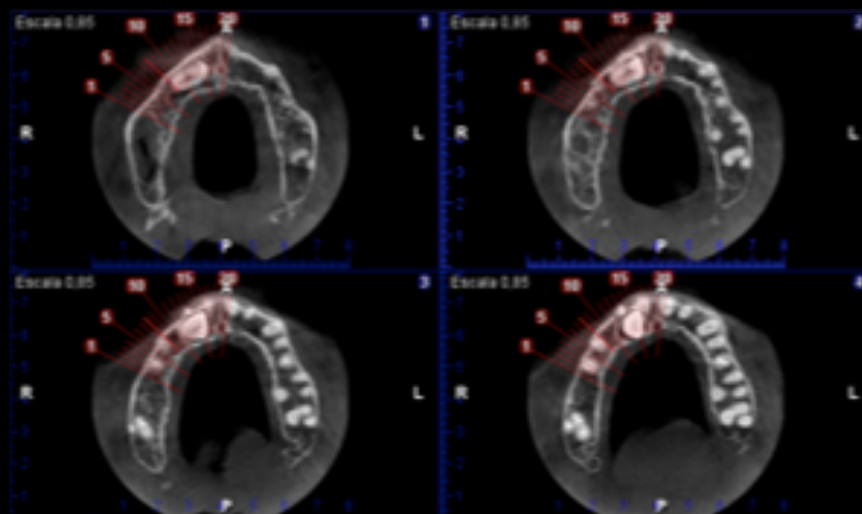
Nemoceph 3 D



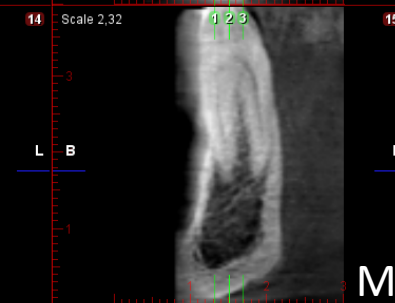
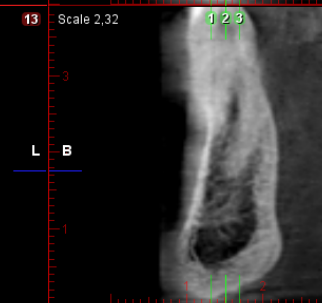
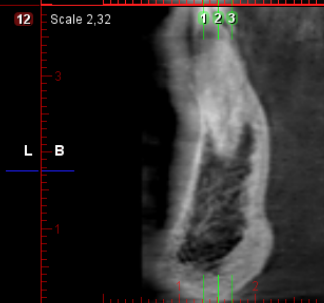
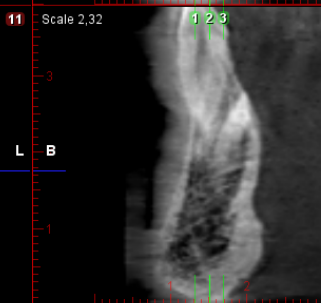
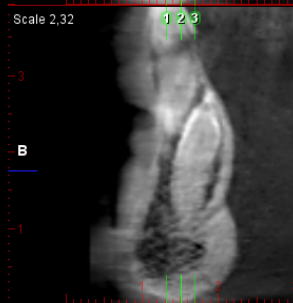
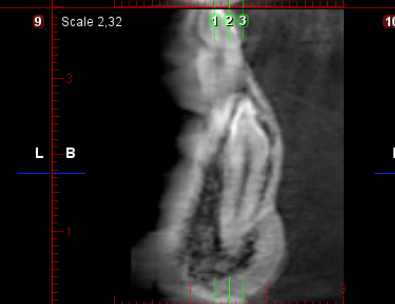
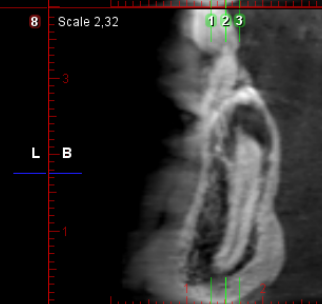
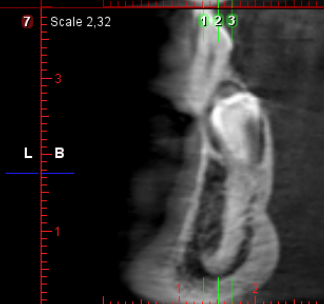
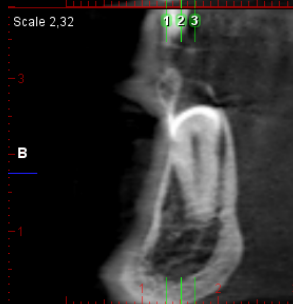
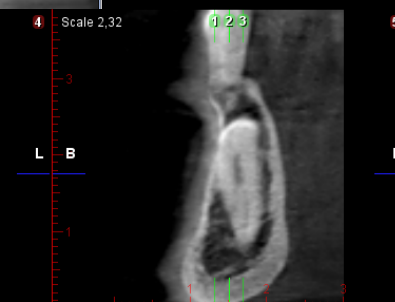
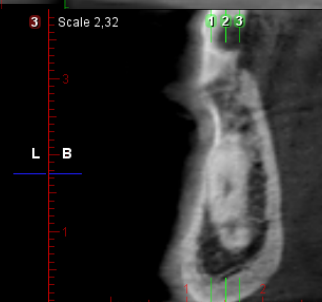
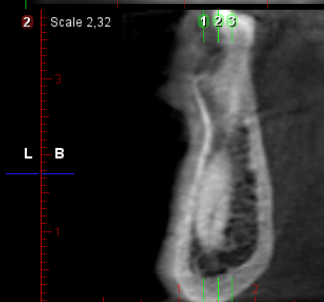
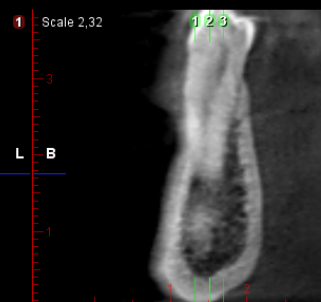
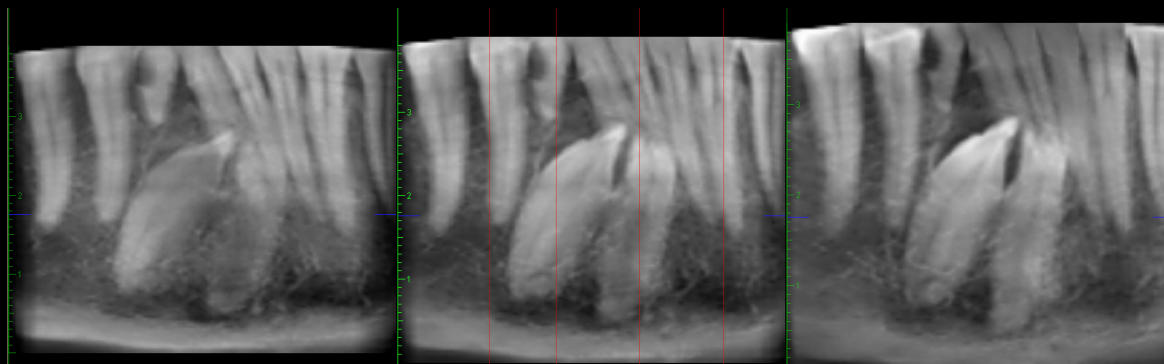


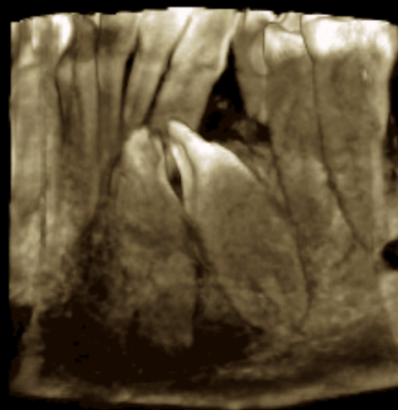




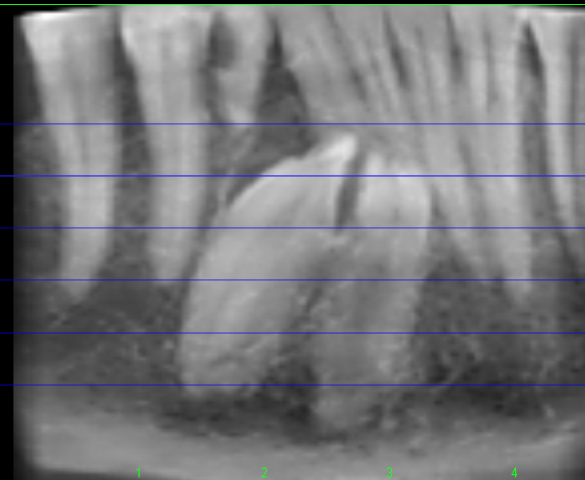








Scale 3,62



L

1

2

3

4

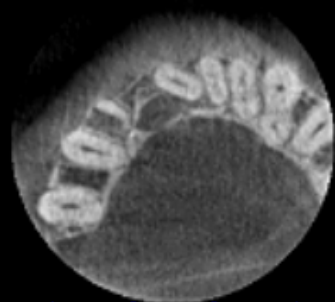
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6

Scale 1,41

A

R

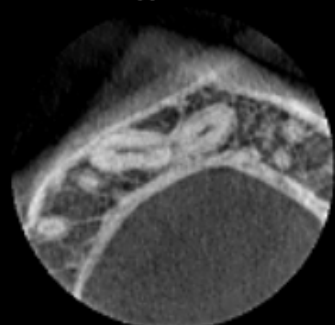


P

Scale 1,41

A

R



P

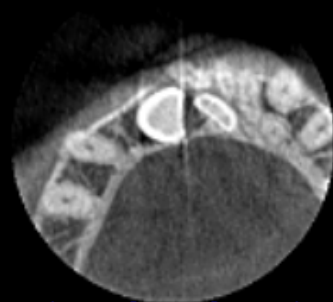
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Scale 1,41

A

L

R



P

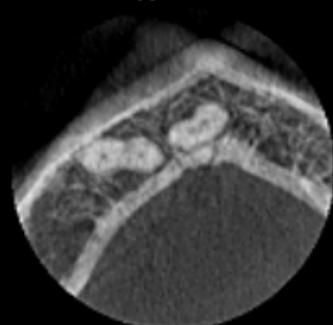
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Scale 1,41

A

L

R



P

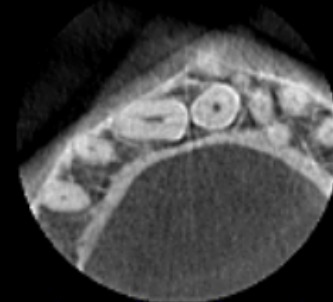
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Scale 1,41

A

L

R



P

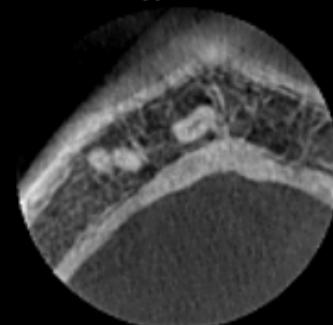
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Scale 1,41

A

L

R



P

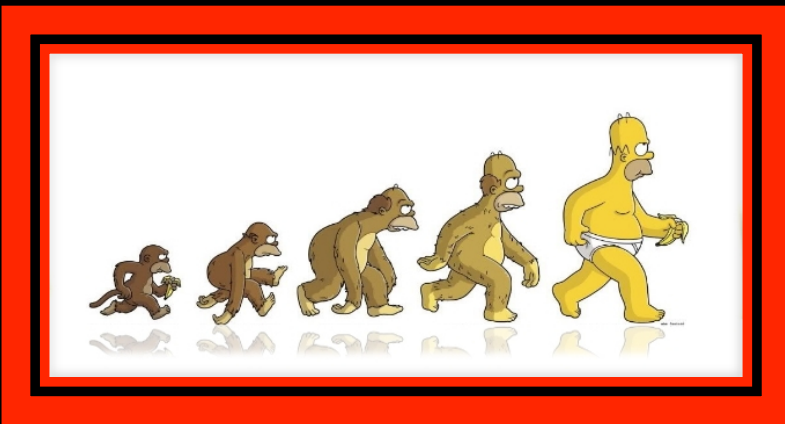
3

L

L

CONCLUSIONES

- Todo proceso diagnóstico bien utilizado facilita el tratamiento y nos acerca al éxito.
- La selección de los distintos recursos diagnósticos es responsabilidad de los profesionales.
- La formación constante nos asegura procesos curativos por encima de los parámetros estándar de tratamiento.



La evolucion es inevitable,
el progreso es optativo..



Muchas gracias...

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